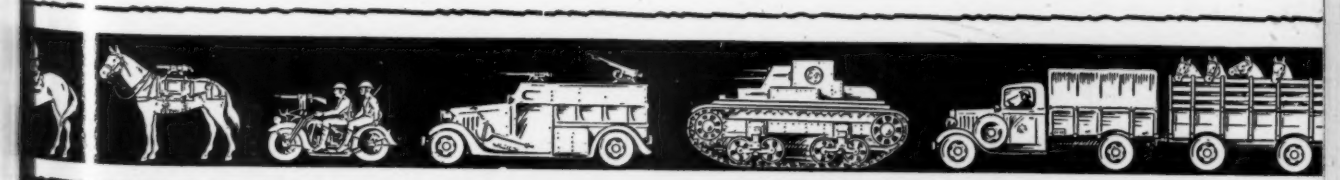
THE CAVALRY JOURNAL



MAY-JUNE, 1941

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By MAJOR C. M. VIRTUE

The readoption by the Army of a personnel system similar to that in use from 1926 to 1933, thus freeing the unit commander and first sergeant from responsibility for practically all individual records and concentrating these personnel records in the unit personnel section, has required a considerable rearrangement of the matter in this text.

In addition to the rearrangement, new chapters have been added on the following subjects: "Company Supply and Supply Procedure," "Mess Management and Records," and "The Company Fund." A chapter on the new personnel system, including a discussion of the organization and operation of the personnel office in the regiment, also has been added. The new edition contains pay tables for enlisted personnel, including air mechanics' pay and flying pay. 396 pages.

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Prices: Waterproof paper binding $1.50; full cloth binding, $2.00

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1624 H St., N.W. *The Cavalry Journal* Washington, D. C.

United States Cavalry Association

Organized November 9, 1885

The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—Article III of the Constitution.

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The Cavalry Journal

PUBLISHED BI-MONTHLY BY
THE UNITED STATES CAVALRY ASSOCIATION
LT. COLONEL FENTON S. JACOBS, CAVALRY, EDITOR

VOLUME L NUMBER 3

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PUBLICATION DATE: JUNE 1, 1941

Deadline date, next issue: July 10, 1941

THE CAVALRY JOURNAL IS NOT RESPONSIBLE FOR OPINIONS EXPRESSED IN PUBLISHED CONTRIBUTIONS

Editorial offices: 1624 H Street, Northwest, Washington, D. C. Copyright, 1941, by the U. S. Cavalry Association. Publication offices: 1406 East Franklin Street, Richmond, Virginia. Entered as second class matter at Richmond, Virginia, under the act of March 3, 1879, for mailing at special rate of postage provided in Section 412, Act of October 3, 1917. Terms: Domestic subscriptions, individual and organization, $3.00 per year. Foreign, $3.50 per year. Canada: including War Exchange Tax, $3.50. All subscriptions payable in advance. Single copies, 75c. Extra copies to subscribers, 50c. THE CAVALRY JOURNAL *does not* carry paid advertisements.

MOUNTAIN TROOPS

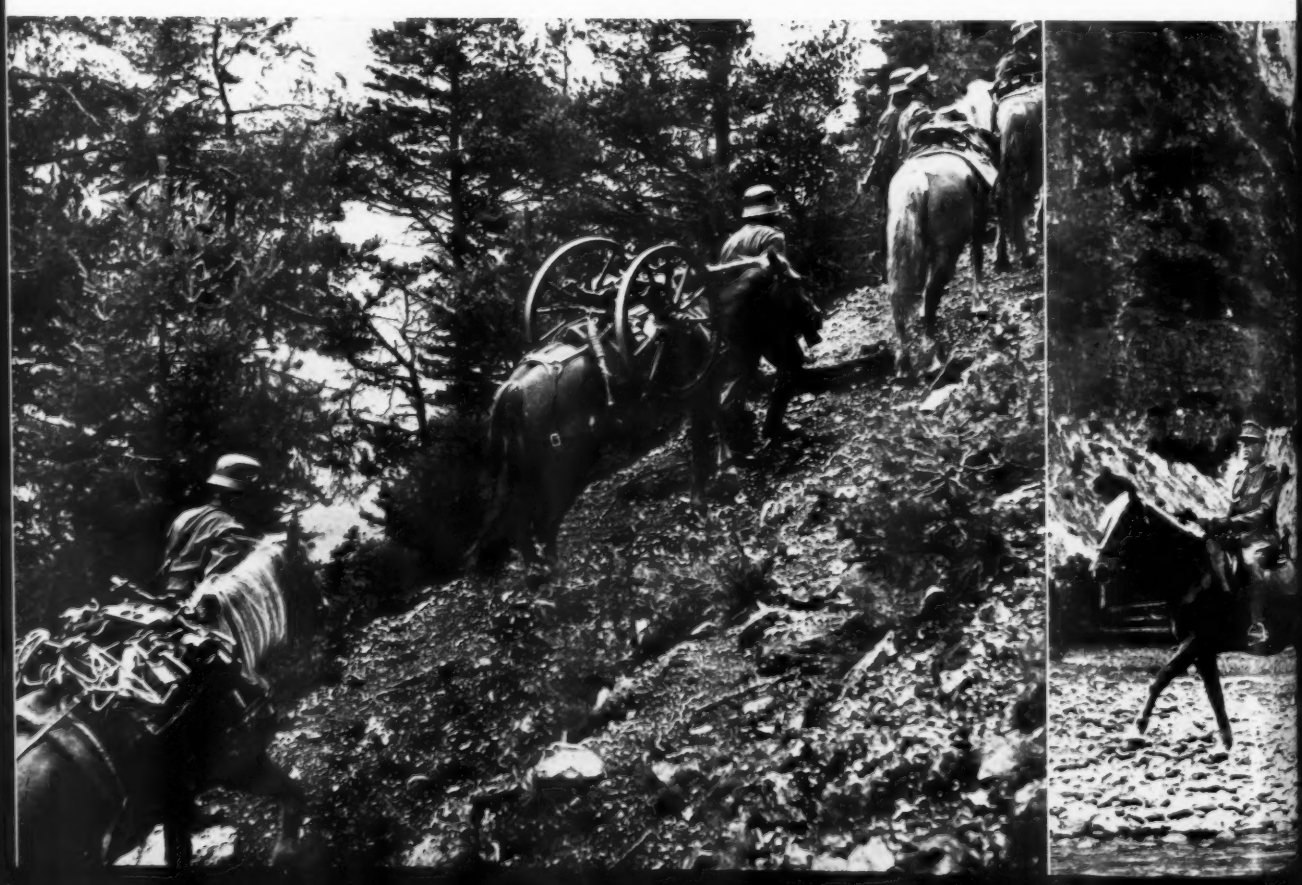
Editor's Note: It is generally known that European armies maintain organized divisions trained and equipped especially for the difficult and important rôle of mountain warfare.

Our Secretary of War has announced that our army must be ready for combat in ANY Theater of War. In reviewing these possible theaters, geographically, one finds a preponderance of lofty and rugged mountains and vast wooded areas.

Horse cavalry, in addition to its generally accepted rôle, lends itself admirably to this type of warfare.

* * * * * *

Appreciation is hereby expressed to General Friedrich von Boetticher, German Military Attaché, for his courtesy in obtaining expressly for The Cavalry Journal, the following valuable, hither-to unpublished article, which describes the German method of developing animals for mountain troops.



Remounts for Mountain Units of the German Army*

By Colonel von Jena, German Army[1]

THE need of troops with special equipment and training for employment in mountain warfare was revealed as early as the World War. Thus Germany, in the course of 1914-1918, organized the German Alpine Corps, the German *Jaeger* (light infantry) Division, and the Wuerttemberg Mountain *Jaeger* Battalion. The history of these and similarly equipped units gives ample proof of the soundness of the decision to organize such special troops. Wherever these units fought, both on the defensive and offensive, they demonstrated the fact that they were crack troops.

Bearing in mind these lessons of the World War, Germany took steps to organize special mountain troops as soon as the fetters of the Treaty of Versailles slackened and the nation regained its freedom to rearm. Garrisons for such mountain units were established in suitable Alpine regions.

The successful operations in Poland and, especially, those at Narvik have shown clearly how wise it was to take that vital step. Those campaigns will forever form a page of distinct glory in the annals of the German mountain units.

In addition to a special type of personnel as well as armament and equipment suited for the particular conditions of mountain warfare, it became necessary to provide special types of remounts, that is, to furnish the mountain units with mounts and pack animals that were adapted to mountain warfare.

It is this *remount service* for mountain troops which we shall discuss in the following.

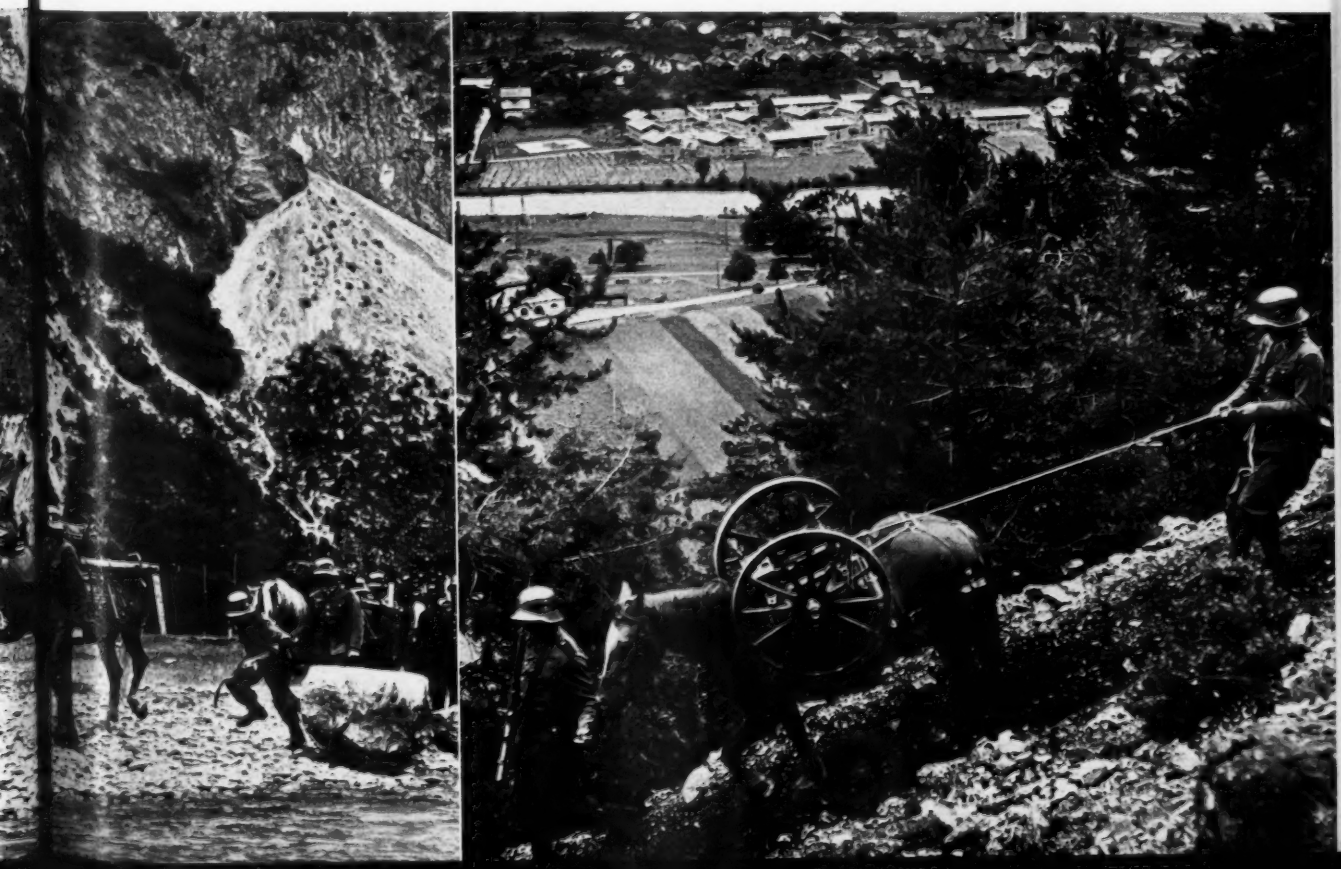
The same as the mountain trooper represents a small, more or less stocky, hardy and wiry type of soldier, so the mountain horse who accompanies him into battle in the vast and steep mountain regions must be small and stocky and possess identical characteristics, namely, endurance, stamina, toughness and frugality.

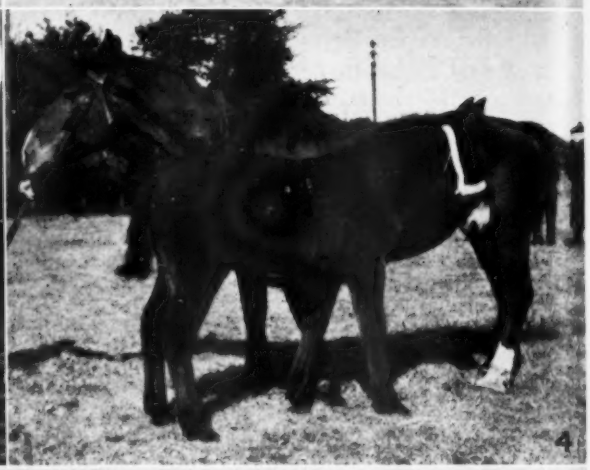
In Europe, such distinct mountain horses are the Huzul breed in the Carpathians, the Bosnian breed in the Balkans, and the Haflinger breed in the Alps. The Haflinger horse traces his origin to South Tyrol; economically and militarily, he is the most practical and best all-around horse for service in high mountains. Both in appearance and performance, the Haflinger comes nearest to meeting the desires and requirements of agriculture and national defense; and so constitutes an equally valuable aid to the mountain soldier as to the peasant on his lonely mountain farm.

*Not to be republished without specific permission from General von Boetticher.

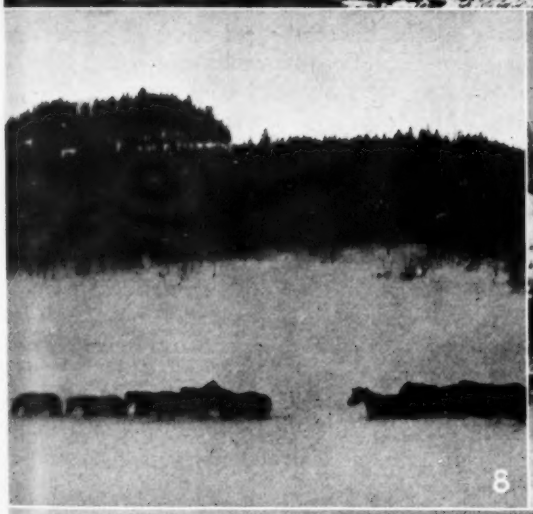
[1]Translated from the German by Technical Sergeant Fred W. Merten, DEML.

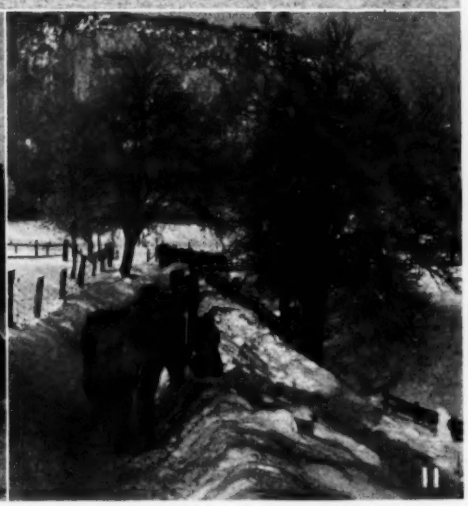
Animals in service with mountain troops





1—Haflinger stallion. 2—Haflinger brood mare and foal. 3—Jack, U.S.A. 4—Half-breed mare and mule foal. 5—Horses and mules grazing together in the Seetaler Alps. (Elevation 6,000-8,250 feet.)





6—Haflinger horses watering at mountain stream. 7—Pastures 6,000 feet above sea level. 8—Haflinger horses taking their daily walk. 9—Stable without stalls at the Wiesen Remount Depot for foals. 10—In the corral. 11—Exercise on the trails plowed through snow

Besides these small, yet hardy mountain horses, the mule has proven to be a strong and tough pack animal, as revealed clearly by the wide use of this hybrid in other countries, such as the United States, France, Italy and Spain.

All nations being dependent upon their respective military-political situation, on the one hand, and geo-political position and climatic conditions, on the other hand, each nation must adopt and promote that form of animal husbandry which comes closest to meeting those requirements, subject to the military-economic interests and demands of the particular nation.

Accordingly, Germany breeds mules and Haflinger horses in a manner corresponding to her military and economic requirements. From these animals, remounts are selected annually and assigned to the mountain units.

The *breeding of the Haflinger horse* rests mainly with the small farmer, that is, 80% of this type of horse are bred by mountain peasants, while but 20% of them are bred by large land owners who maintain small stud farms. For the present, the breeding area of this type of horse is confined exclusively to the Alpine regions. The breeding is conducted and directed by a separate stud association with headquarters at Innsbruck. (See illustrations 1 and 2.)

Mule breeding in Germany is carried on almost exclusively by small farmers throughout the country, on the plains as well as in the mountains, though especially in regions where suitable brood mares are available.

Jacks are imported from the United States, France and Italy. No definite conclusion has been reached as yet with regard to the breeding qualities of the different types of jacks. (For illustrations see 3 and 4.)

Subject to the economic conditions of the mountain peasant, on the one hand, and the military purpose which the Haflinger and the mule are to serve, on the other hand, as well as for the sake of uniformity in supplying the Army with remounts, great importance is attached to the breeding of these prospective "mountain fighters."

Both the small horse and the mule are purchased by the Army at the age of five months, that is, shortly after they are weaned, and raised in herds numbering from 100 to 400 heads at specially equipped remount depots for foals. All of these remount depots are located high in the mountains.

The remount depot for foals must have an adequate fodder basis and sufficient pasture land at various elevations, up to 9,000 feet above sea level, in order to accustom, that is, acclimatize, the young animals from the earliest to the environments in which they will be used later.

Grazing land plays the main rôle in this process of raising animals. The object is to give the horse and mule an opportunity to acquire all of the characteristics that must be required of an animal used by mountain troops, as mentioned above, namely: a small and stocky conformation (the animal must be able to stand firm on slopes); a strong constitution; toughness and endurance; frugality; and, last but not least, sure-footedness. (For illustrations see 5, 6 and 7.)

Only such a uniform and hard method of raising can assure a uniform remount service, a service which furnishes the mountain trooper an animal on which he may absolutely rely at the highest elevations and in times of stress and peril.

While the animals, in the summer, are kept on the range at high elevations, where no sheds are provided and snowfall in July and August is no exception, in the winter the animals remain at the remount depots, in large stables without stalls where they are free to exercise their limbs. Yet, even in the coldest winter and deepest snow, the animals are turned out into corrals and driven along trails plowed through the snow. The strong and heavy coat of hair which the animals develop under those conditons require that the stables be kept cool and well ventilated, in order to preserve the health of the animals and guard them against diseases. (For illustrations see 8 to 11 inclusive.)

After three years of being exposed to all kinds of weather (see 12), the remounts are issued to the troops, where their training follows.

This method of raising the animals in herds and yet giving them individual care assures the development of good-natured and even-tempered animals, especially mules, besides producing sound and hard specimens.

Thus the Haflinger horse and the mule constitute an efficient and reliable "weapon" in the hands of the mountain troops, a weapon which has helped them to accomplish such feats of heroism as the Battles of Lemberg and Narvik and will continue to do so in the future, wherever the vital requirements of the nation may call them into action.

12—Mules on the range

U.S. Horse Cavalry Girds For War

By Colonel Albert E. Phillips*

JEB STUART and Phil Sheridan ride again but they ride faster and farther and hit harder, yes, tremendously harder, for they have adopted the motor and literally placed their cavalry on wheels. They have called on the plane and likewise the tank to come to the aid of their faster, better-bred steeds with bombs and guns aplenty and armored cars galore. American horse cavalry was, and still is, unique. There's none like it in all the world.

European military writers still refer to the brilliant exploits of our Civil War cavalry. This war developed horsemen who were skilled fighters afoot or mounted, though they fought mostly on foot. Armed with the carbine or rifle those audacious cavalrymen used their mounts to move fire-power rapidly from place to place and thus hit at vital and critical points often in the nick-of-time. These were the so-called "hit-and-run" or in-and-out tactics of cavalry with which a small force may inflict a series of damaging blows. Here in '61 to '64 was developed what the Germans now call "speed tactics." These tactics so riled the other arms of Civil War days as to bring forth the familiar slur: "Whoever heard of a dead cavalryman?" And yet even the old flint-lock and the muzzle loader could both bring down a cavalryman if one could hit a running target. But such targets are not easy to hit, as we will show later.

The paramount problem today, however, is to get to, or reach, all those places which neither the tank nor the motor can reach, with a preponderance of fire of all types from pistol to cannon. And if the motor can make it, American Cavalry transports its horses in trucks, preceded by its own armored cars and light tanks. But it still fights most of its battles on foot and utilizes the fastest and most appropriate modes of transportation to reach and attack the enemy. In much of this terrain the horse is still supreme. And horse cavalry is still the fastest ground force that can travel all types of battlefield terrain either day or night, in all kinds of weather.

But fighting on foot, simple as it sounds, may mean a carefully prepared attack with artillery, tanks and planes supporting a suddenly launched, dashing movement of mounted men to secure an important tactical advantage, then dismounting to fight and hold it.

Cavalry fights best when part of a team, or on independent missions. One would not, in the normal case, assign a cavalry division to deliberately attack either an infantry division or a mechanized division; but under proper conditions the new American Cavalry Division may defeat either.

An infantry division and a new cavalry division operating under a single control is a more formidable tactical team for maneuver warfare than two infantry divisions.

Modern mechanized warfare is a carefully planned methodical affair which creates new possibilities for Independent American Cavalry Divisions and Cavalry Corps.

Given the proper quota of attack-bombers and fighters, the new American Cavalry Divisions, by employing surprise, will completely upset methodical warfare.

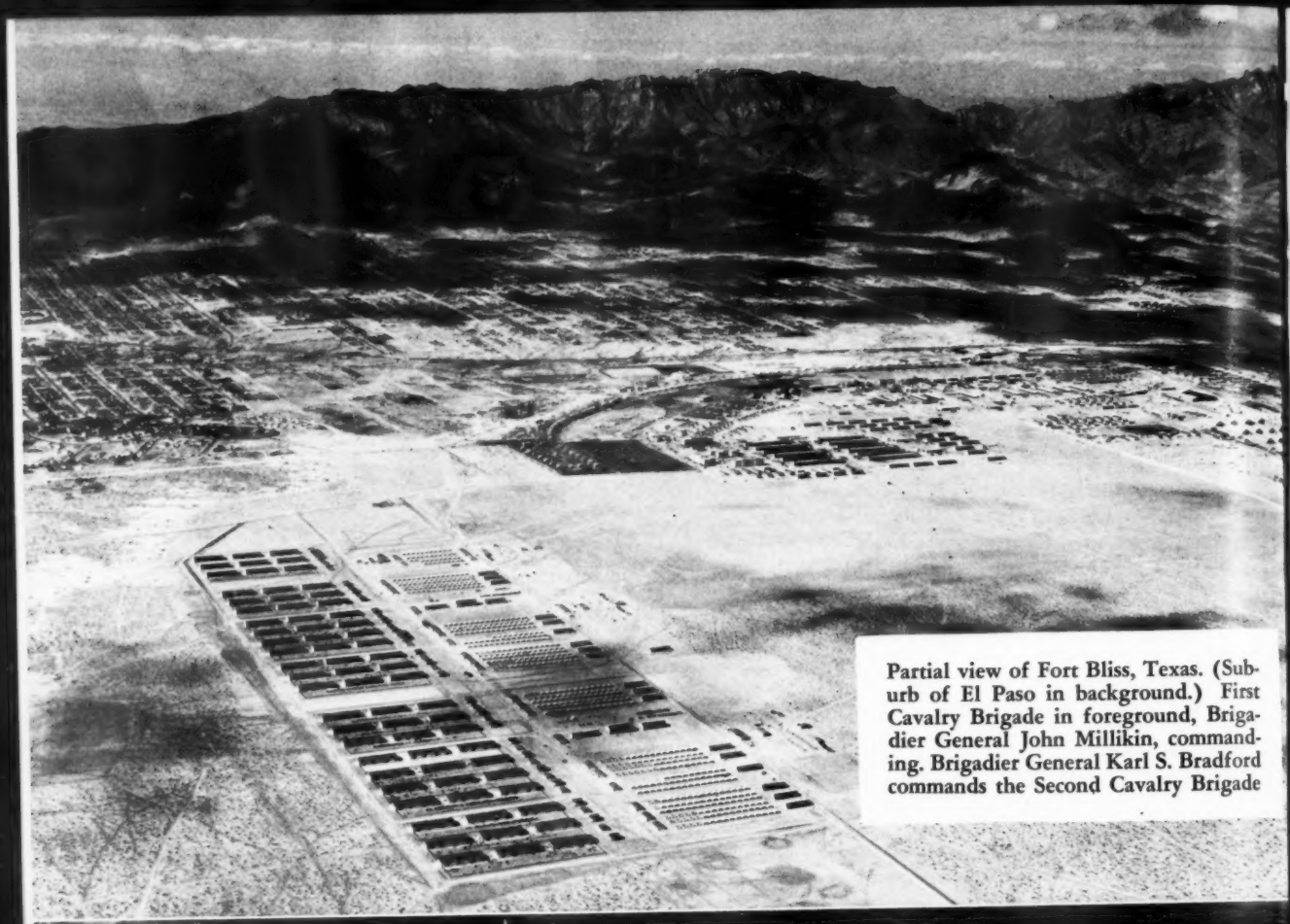
When the tide of battle swings to and fro, can any tactician doubt the effect of a sudden blow against our antagonist—by the new AMERICAN Cavalry Division? Remember, there is no war unit comparable to it in all the world.

The new American Cavalry Division is the one completely integrated army unit equipped to rapidly move over any type of terrain. Where the motors can't go, the horse units will flow.

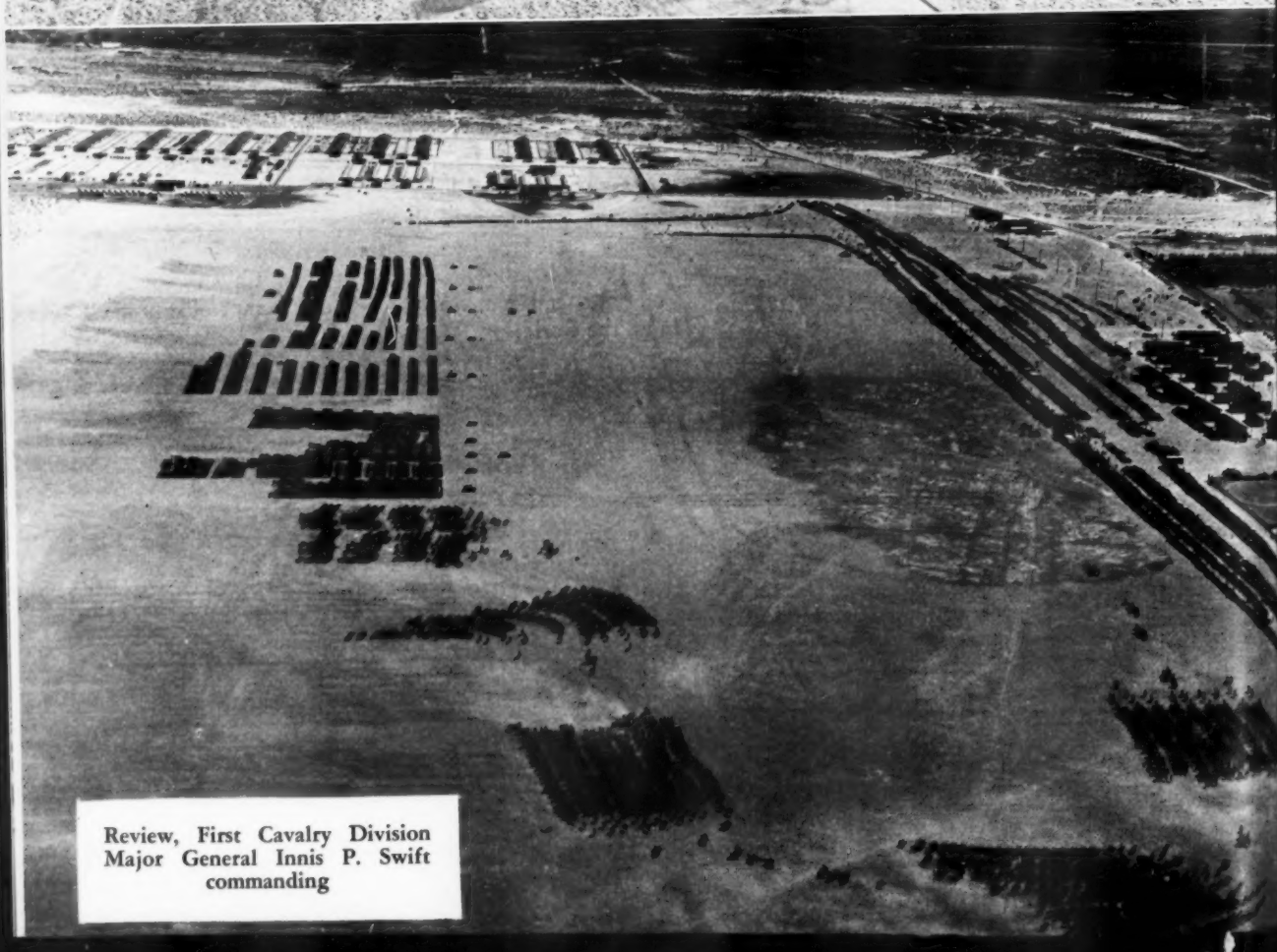
Cavalry, as we employ it, is a heritage handed down to us by those masterful horsemen of the American Civil War. What is this new American Cavalry Division? Here are the highlights:

Four horse regiments, each with a headquarters troop; one .30 caliber machine-gun troop; one special heavy weapons troop armed with .50 caliber machine guns and long-range mortars; two rifle squadrons of three troops each, equipped with Garand semi-automatic rifles; one division reconnaissance squadron composed of two scout car troops; one motorcycle troop and one (light tank) armored troop; two battalions of

*Colonel Phillips, Cavalry (Retired), and now on active duty.



Partial view of Fort Bliss, Texas. (Suburb of El Paso in background.) First Cavalry Brigade in foreground, Brigadier General John Millikin, commanding. Brigadier General Karl S. Bradford commands the Second Cavalry Brigade



Review, First Cavalry Division Major General Innis P. Swift commanding

horse artillery, especially organized for cavalry action, with twenty-four 75-mm. howitzers (the fellows which reach over the hill with curved fire and hit when least expected and which may also fire over the heads of advancing horsemen) and an added motor-drawn battalion of twelve 105-mm. howitzers.

Here is a summary of the armament: 327 light machine guns, .30 caliber; 356 heavy machine guns, .30 caliber; 265 machine guns, .50 caliber; 490 Thompson sub-machine guns, .45 caliber; 54 antitank guns, 37-mm.; 28 mortars, 81-mm.; 10,342 pistols and 4,592 semi-automatic rifles, plus the artillery above mentioned. An air observation squadron is attached to each division. Air fighting and bombing units are attached as needed. Of armored vehicles there are: 145 scout cars, 13 light tanks, 12 mortar carriers, and 374 motorcycles.

Here you have an array of tremendous mobile fire power for attack or resistance. And the ability to shift this fire power adds to its value. The new cavalry division represents the most formidable unit of its kind ever designed within an army. For the present, the Army will have two of these horse cavalry divisions; nine corps reconnaissance (horse-mechanized) regiments; one separate horse cavalry brigade; two separate horse cavalry regiments, and ten reconnaissance troops.

Wars are successfully fought by combat teams balanced as to arms for the terrain over which the battles are fought. These ground teams *MUST* be covered by an air force balanced as to planes for requisite air power.

The brilliance of recent mechanized warfare has cast a shadow over the old prosaic arms until they shall once again prove that man and his war allies—terrain and weather—still dominate the battlefield and also the machine. This was again proved in the battles between Greece and Italy. The recent battles in Greece, between the Germans and the Allies, prove nothing. Superiority in every category, plus favorable weather, is an axiom as old as warfare itself.

Mechanized forces are "forced" to use the passes in mountain warfare and thus suffer enormous losses. Cavalry would avoid the passes by moving around or over the mountain-tops – secretly, when desirable, or preceeded by air-bombers when necessary.

Mechanized warfare is specialized warfare, supreme when conditions are favorable, of little use when they are not. Russia could not use its machines in the bitter cold of Finland's winter. Japan, due to mud, signally failed in the use of machines in its war with China. Italy's motors failed in winter warfare in Greece. Would machines or American Horse Cavalry prove more valuable in the Philippines? Where are we likely to fight our wars? If in the Western hemisphere, then all conditions, without exception, favor the new American

Cavalry Division, with its horse and light armored units.

We must use machines whenever possible to save man-power, but, first of all, we must use the proper technical team to achieve tactical success and thus save the country.

Man hasn't yet made the machine that will replace the foot soldier, the pack artilleryman, and the American Mounted Cavalryman. Only the foot-soldier can fight under any and all conditions. And only the basic arms, infantry, cavalry and artillery, can fight in any terrain or in any weather. Of these, the cavalryman with his rifle may fight alongside of the infantryman or use his horse to further assist him by rapidly moving fire-power or, to chase the mobile enemy.

It is in the tropics, and particularly in the Western hemisphere, where one encounters the swampy morass, the impenetrable jungle, the steep, thorny-patched mountains, and the lack of roads for all types of wheel transportation. The foot-soldier, the horse cavalryman with his automatic rifle, and machine gun pack horse, and the pack artilleryman and his ally, the pack-mule, are the trail-blazers who work their way through the inaccessible places and come out with an unbeatable combat team.

In the December, 1940, issue of *Harper's Magazine*, General George C. Marshall, Chief of Staff, tells of some of the problems with which the high command was faced in meeting the requirements for a modern army. In part he says, "with a natural tendency to emphasize the dramatic aspects of the fighting, war correspondents have created in the popular mind the impression that the bulk of the German Army is made up of bombing planes and armored divisions; and have thereby obscured the essential clue as to its remarkable success—the fact that it is a balanced force of all arms." "The German Army had the great advantage in plan-

ning the necessary balance and teamwork between its component elements, of definitely knowing in advance who was to be the principal enemy and exactly what terrain would have to be fought over."

Remember, that Germany had nearly 800,000 horses in her army; that she probably maintains 17 regiments of horse cavalry; that her divisional artillery is horse-drawn by 400,000 horses, and that there are 18,000 horses in her 200 infantry divisions. But, most of all, let us not overlook the fact that with all her might, Germany hasn't any military unit comparable to our new Cavalry Division.

We, in America, were left a heritage which we are now bringing to full fruition—the American Cavalryman with his automatic rifle, his machine gun, artillery, armored cars, and light tanks. His one remaining prime need is adequate air support, for without that no arm can succeed. American Cavalry hits, runs, and hits again, much like a master boxer, but it hits fast and hard and in the least expected places, and the blows of this Cavalry are not mere love taps.

Of course, mounted men are vulnerable to machine gun and rifle fire, just as infantry is, but not to the extent, some military men believe. Surprise, plus speed, plus supporting fires, will largely compensate for the apparently easy target. Here are two interesting examples showing the difficulty of hitting a speedy, twisting target. The Cavalry regiment of which I had the honor of being an officer for many years, was traversing the plains of Wyoming. It was a twelve-troop regiment stretching out in column for nearly a mile. Suddenly two antelope appeared on a flank about 300 yards distant, loping along toward the head of the column. A trooper or two from each troop hurriedly dismounted, jerking rifles out of gun-boots, and waited for the near approach of the animals. At least 100 shots were fired. All missed. Remember—no one was firing at the soldiers.

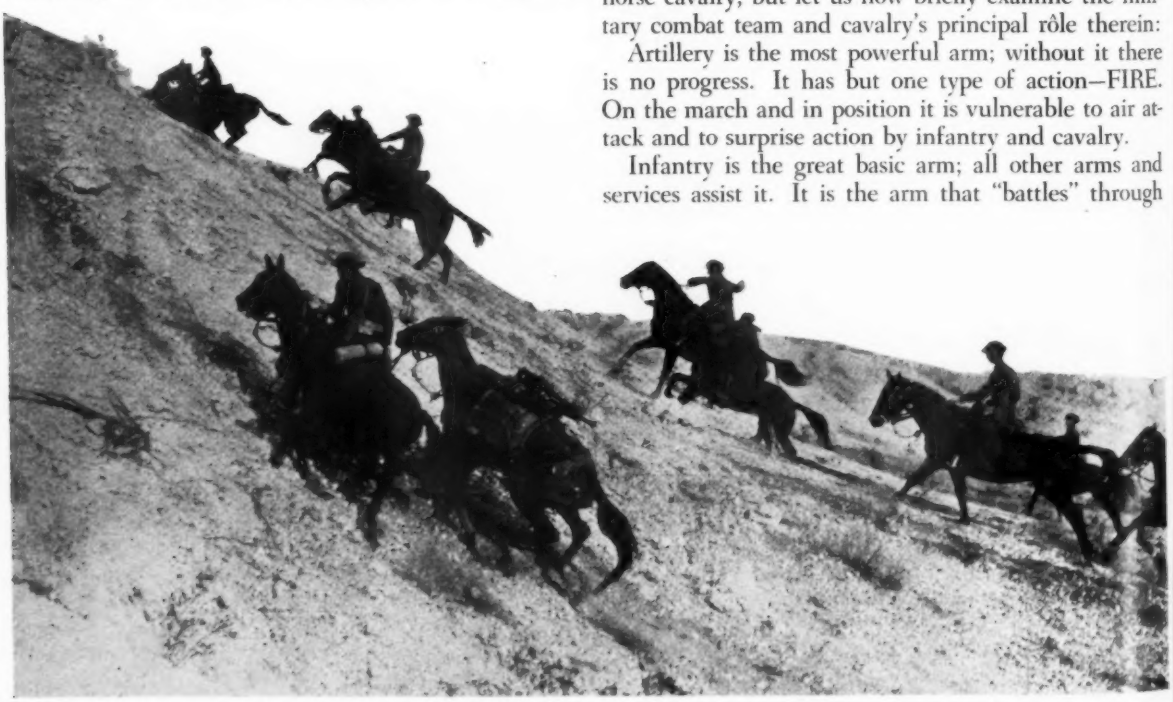
During the Ute Indian campaign in the Powder River Country of Montana, in the winter of 1906, I was accompanied by six expert riflemen on a scouting trip, and, while going down hill at a walk, we saw five big blacktail deer not more than seventy-five yards to our left. We halted, and four of the riflemen dismounted and grabbed their rifles. The deer bolted and ran so close to us that one rifleman was almost bowled over. Yet there were no casualties among the deer. Depend upon it, a horse is not the easiest of targets, either.

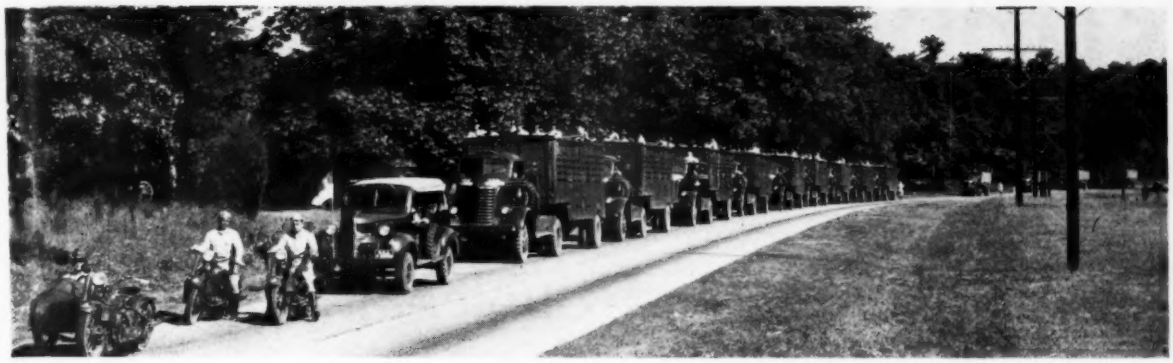
In building our new army we are not so fortunate as was Germany. She knew who her likely, or potential, enemies were, and could plan and build accordingly. We may know how much aviation we require; likewise, infantry and artillery, but when we discuss armored troops and horse cavalry, the many unknown factors will force a decision based on probable requirements. Our War Department has given us the world's most powerful Cavalry Division and the American people may safely place their trust in their judgment. "When" to use cavalry is equally as important as "how" to use it—but to have it is of first consideration.

So far our discussion has been confined mainly to horse cavalry, but let us now briefly examine the military combat team and cavalry's principal rôle therein:

Artillery is the most powerful arm; without it there is no progress. It has but one type of action—FIRE. On the march and in position it is vulnerable to air attack and to surprise action by infantry and cavalry.

Infantry is the great basic arm; all other arms and services assist it. It is the arm that "battles" through





Horse Cavalry Portée

and holds ground. Cavalry is the only other arm organized into divisions and capable of independent action.

In order to "progress in battle" both infantry and cavalry require fire support. Infantry losses are in proportion to the time it is exposed. Cavalry depends on the suddenness and swiftness of its attack to avoid excessive losses in assisting its infantry. Every action by cavalry is to assist its infantry to win, although cavalry may engage in many isolated fights.

American cavalry with its armored and horse elements is to infantry and artillery what cruisers and destroyers are to battleships. It escorts its brother arms on the march and guards them from the lurking enemy in battle. It leaps instantly to the challenge of a threatening foe or sacrifices itself, if need be, to achieve victory or prevent defeat. It asks no favors of weather, roads, or time of day. It asks only for air support.

Fire superiority is a determining factor in warfare, but fire superiority may now suddenly be lost by a shower of bombs from the air—thus creating untold possibilities for horse cavalry divisions. Horse cavalry, with its weapons in pack, is the one force which can rapidly traverse any battlefield terrain.

Fire superiority isn't all-decisive—a tactical move that strikes the enemy at a critical or vital spot, is often more destructive.

Will not American air supremacy enhance the value of cavalry, or, to put it another way—will it not be of greater value to cavalry than to other arms?

The Air force and the Cavalry are both fast-moving arms and their tactics are similar. Air supremacy will dispel all fear of enemy air-attack. Planes will "spot" distant targets, especially enemy mechanization. But air-bombers will strike that and what is left of it may be taken care of by cavalry's own mechanization, artillery and antitank weapons.

Air supremacy during battle will pave the way for quick action by cavalry against demoralized troops. And, with it, cavalry will be in a far better position to keep enemy supporting units "at bay." In fact, cavalry will have greater freedom than it has ever had. Give the cavalry leader "clearance-in-the-sky" and information of "what's ahead," plus air-plugging of it and he'll be ready to take care of whatever comes within his sphere of action. If rapid movement on the ground is important, then air supremacy will protect it and accelerate it.

With armed and armored support on the ground and plane support in the air, cavalry becomes a formidable force to be reckoned with and for the leader who knows how to make the most of it.

The plane will go farther in power and destructiveness, but the tank will have to fight ever-increasing opposing weapons, bombs, guns, both antiaircraft as well as antitank, "thermite" hand-grenades, traps, land mines, etc., etc. Fast armored and combat cars are still in the embreyo stage of development, and, when fully developed, they will tie closer to cavalry.

Cavalry may often clinch what the Infantry has taken but not yet won; when confusion and exhaustion reign and the dreaded counterattack is readying for the strike, or the enemy's reserves are moving to snatch victory from apparent defeat, a cavalry thrust may save the day.

When, and if, the high call to arms comes, American Horse Cavalry will again achieve great glory. The field of opportunity is still wide open. The horse still has his place in warfare, just as it has had from the days of the old warrior Ghengis Khan, down the era of the flintlock, on to the machine age, and from Kitty Hawk to the Spitfires. You can't count him out in a thing so unpredictable as war, and it would be ridiculous to try.

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Rubber Tires, Cavalry

By Lloyd L. Baldwin*

Types, Operation, Troubles and Remedies

IF it were not for the highly developed and specialized tire equipment on our fighting force's motorized equipment, present-day blitzkrieging would not be possible. Fighting would revert to obsolete tactics employing solid tires or inferior and obsolete pneumatic tires on trucks, combat units, artillery, etc. Even the horses of the cavalry units are now carried from one part of the country to the other in special-built, truck-tractor-drawn portée trailers when long distances are to be negotiated. The tires and tubes on the wheels of all these military vehicles are indeed playing a vital part. The writer has talked to many people in the past several months of mounting interest in war machines and national defense, and has discovered that they are hungry to understand more of the details of modern war equipment and its component parts. The following paragraphs give a description of the tire equipment in cavalry units and also touch on the problems of application, maintenance, and operation.

The tire, tube and rim parts of the motorized and mechanized equipment used by the cavalry may be briefly described, as follows:

Pneumatic Tires

The types of pneumatic tires include motorcycle tires, passenger car tires, and truck tires.

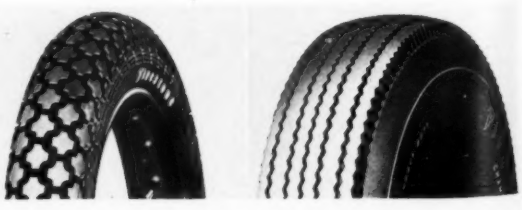
Motorcycle tires as used to date are identical with those used commercially and by the general public, except that the Army always specifies that the tread designs be of the high-traction type. The traction-type tire is not always used in commercial operations. It is necessary for motorcycles to operate off the road on cross-country terrain. Figure 1 illustrates the type of tread pattern best suited to military operations.

Passenger-type tires (Figure 2) are identical with those used currently on automobiles in commercial and private operation. In some special instances the mud and snow type of tread pattern (Figure 3) is used for additional traction, particularly on self-propelled vehicles such as light passenger cars. Regular highway type treads are used on the small gun carriages and on most of the passenger cars.

Truck tires are of two general classifications, known as regular highway type treads and mud and snow treads. The former are satisfactory for use on gun carriages and units which operate on improved roads and equipment which does not require super traction. The latter tires have been very successful on equipment such as prime movers, scout cars and front wheels of half-track vehicles. These two types of tires are illustrated by Figures 3 and 4.

Tubes for Pneumatic Tires

Due to the fact that much of the cavalry's equipment is called upon to do scouting work and reconnaissance jobs where enemy's outpost or patrol fire is encountered, *bullet seal tubes* are needed. *Regular tubes* as used



(1) *Left*, motorcycle tire. (2) *Right*, passenger type tire

Editor's Note: In appreciation of this timely and valuable contribution, grateful acknowledgment is expressed to the *Firestone Tire and Rubber Company, Akron, Ohio,* who, upon the request of the Editor of The Cavalry Journal, prepared this article specifically for presentation in this issue.

It often has been said that "the horse is no better than his feet." In this age of extensive mechanization and motorization this statement obviously is equally applicable to our rubber tired vehicles. In other words, to "get thar fustest with the mostest," *watch your tires.*

*Sales Engineer, Firestone Tire and Rubber Company, Akron, Ohio.

(3) and (4) Types of treads used on trucks, scout cars, etc.

currently with pneumatic tires are used on some of the equipment such as the 37-mm. antitank gun carriage, passenger cars, etc. In case of actual warfare the cavalry could use a third type of tube known as the *puncture-proof tube,* which would prevent many flat tires, and delays from same.

Years ago, a sponge filler was used in the tires of armored cars and scout cars and gun carriages instead of a pneumatic tube. In modern high-speed operation it was found that these failed due to excessive heat generated in the heavy, bulky filler. All these fillers have since been replaced with bullet seal tubes described and illustrated in Figures 5 and 6.

Compression-Plastic Type Bullet-Sealing Tubes

Tire manufacturers have been very successful in developing an outstanding product known as the bullet-resisting tube. These have been found to be effective in sealing holes made by .30 and .50 caliber projectiles. In order that a manufacturer be eligible to supply such bullet-seal tubes he must first satisfactorily pass rigid firing tests conducted by the Ordnance Department of the Army at its large proving ground at Aberdeen, Maryland. Tubes must meet in this test, requirements of running cool enough to withstand the heat developed in operation. They must also satisfactorily seal ten or more .30 caliber bullets fired through the tire and tube in various ways. Tests specify that only a certain percentage of the original air pressure in the tire shall leak over a period of two and one-half hours after the first shots are fired.

In the event that *puncture-proof tubes* are likely to be used in places where regular tubes are now used, we illustrate this type of tube in Figure 7.

Rims for Pneumatic Tires

Three general types of rims cover all of the pneumatic tire applications. These are drop-center rims, semi-drop-center rims and flat base rims. It must be understood that tires designed for drop-center and semi-drop-center rims cannot be used on flat base rims and conversely tires designed for flat base rims cannot be used on drop- or semi-drop-center rims. A special part of this article is devoted to instructions and illustrations of the mounting and demounting of tires on rims for purpose of informing those readers who are assigned the duties of maintenance or the duties of supervision or responsibilities of same. The writer would like to emphasize this feature because a number of specific

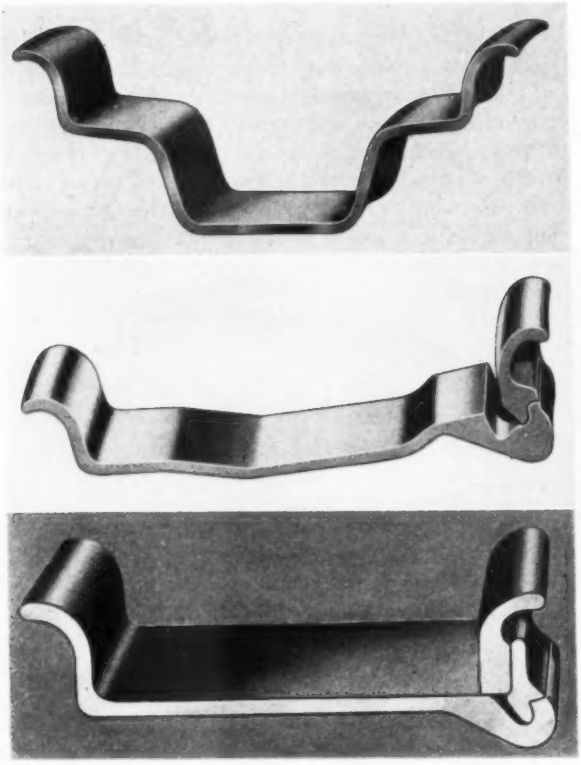
(7) Puncture-proof tube

cases of misapplication have been noted during recent maneuvers. Figures 8, 9 and 10 show the above three rims. The types of rims used in each specific case are outlined in the table shown on page 18.

Bogie Roller (Solid) Tires

The bogie roller is the load-carrying wheel of track-laying vehicles—tanks and half-track vehicles. A great deal of special development work has been necessary to produce satisfactory solid tires for this service. Twenty miles per hour has always been considered about the maximum speed which solid tires can operate satisfactorily. Speeds greater than this create excessive heat, which causes early failure of the tread rubber due to heat disintegration. Special compounds were developed for these military vehicle bogie wheels which are performing satisfactorily at speeds up to forty miles per hour. Both of these vehicles employ a track, treaded with rubber on both sides, which helps to protect and

(5) and (6) Bullet-sealing tubes

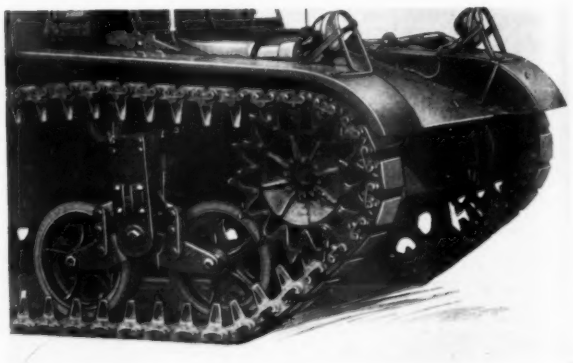


(8) ***Top,*** **drop-center rim. (9)** ***Center,*** **semi-drop-center rim. (10)** ***Bottom,*** **flat base rim**

prolong the life of the bogie rollers. Bogie rollers are shown in Figures 11 and 11-a.

Rubber Tracks

Rubber tracks are used on the cavalry's light tanks and half-track vehicles. Cross-country mobility is one of the first requisites of such vehicles and without a track-laying or crawler feature such maneuverability would be limited. Much has been written in recent articles concerning the short-comings of other countries' military equipment when steel track units were compelled to move long distances over improved roads. Steel tracks have advantage of obtaining more traction in certain types of soil conditions but are definitely short-lived when operated at high speeds over improved roads. Consequently, the Army has developed these rubber tracks. The one is made up of many rubber blocks connected through rubber bushings which require no lubrication, and is illustrated in Figure 11. This is used on a light tank.



(11) Bogie rollers

(11-a) Section of bogie roller

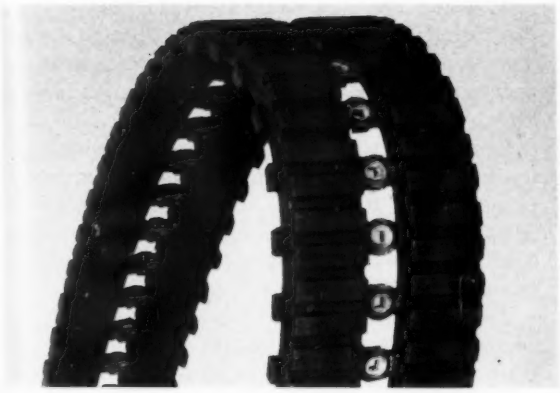
The other type of track is the continuous rubber band. This is used on the half-track vehicles. This is shown in Figure 12.

(See note.)* A more detailed study of the problems of operation, application, repair and general description of each of these items is given in the following:

(1) *Motorcycles, Solo.* Motorcycles also operate on cross-country terrain, as well as on highways and

*NOTE: CAVALRY DIVISION EQUIPMENT, ACCORDING TO PRESENT TABLES OF ORGANIZATION:

(1) Motorcycles, solo—4.00-18 high-traction pneumatic motorcycle tires.
(2) Motorcycles, side-car and motortricycles—4.50-18 or 5.00-16 high-traction-type pneumatic tires.
(3) Scout cars—8.25-20 pneumatic mud and snow type tire, with bullet-sealing tubes.
(4) Passenger cars, light—6.00-16 commercial type pneumatic tires, and regular tubes.
(5) Light tanks, Track-laying type—20x6 size bogie rollers, pressed-on type solid tires.
(6) Command reconnaissance cars (Bantam), ¼-ton, 4x4, 5.50-16 or 6.00-16 high-traction (mud and snow) pneumatic tires and regular tubes.
(7) Half-track vehicles—8.25-20 high-traction tires on the front (driven) wheels with bullet-seal tubes.
(8) Antitank guns, 37-mm. (towed by scout cars) 6.00-16 commercial-track pneumatic tires and regular tubes.
(9) Field Howitzer, 75-mm. (horse-drawn)—6.00-20 commercial tread pneumatic tires with bullet-sealing tubes.
(10) Field Howitzer, 105-mm. (towed by 4x4 truck prime mover) 7.50-24 commercial-tread pneumatic tires and bullet-sealing tubes.
(11) Mortar, motor—8.25-20 10-ply tires and tubes same as scout cars.
(12) Trucks, pick-up—various sizes of pneumatic tires and regular tubes.
(13) Trucks, ½-ton, 4x4, command reconnaissance on ambulance body—7.50-16 high-traction-type pneumatic tires.
(14) Trucks, 2½-ton, 6x6, cargo—7.50-20 high-traction-type (mud and snow) pneumatic tires.
(15) Semi-trailers (Truck-Tractors and special horse-portée type)—commercial truck tires and tubes.
(16) Truck, wrecking, 4x4, 4-ton—mud and snow tires and regular tubes.



(12) Continuous band type track

roads. High-traction tires are required as illustrated in Figure 1.

Regular commercial tubes are used, although bullet-sealing tubes may be required in actual warfare.

Wheels and rims are integral and are shown in the indicated figures.

Troubles and Remedies

Fast wear on the rear tire is the most prevalent complaint, the only remedy for this is to keep the inflation pressure at the recommended figure, and a tolerant use of the clutch and brake by the operator.

Punctures are naturally encountered, which are repaired in the usual way with a "cold patch" or a vulcanized patch. Puncture-sealing tubes may be secured for these vehicles, and it appears to the writer that more of these tubes should be used to eliminate delays due to punctures.

Valve damage. Valves are frequently damaged or pulled from the tubes because of the tire slipping on the rim. This is definitely caused by under-inflation, and the remedy is obviously to maintain the proper air pressure. *Keep valve caps on valves.*

(2) *Motorcycle, Side Car.* The tires and tubes used on these units are identical with those outlined in paragraph 1 above.

(3) *Scout Cars.* Due to the practical use of this vehicle by scouting parties over cross-country terrain, a *high-traction tire* is specified. This type of tire is pictured. (See illustrations 3 and 13.)

The tubes in all of the tires are of the bullet-resisting type as are shown in Figures 5 and 6. It is obvious that equipment being used in this type of service would need some protection against enemy fire.

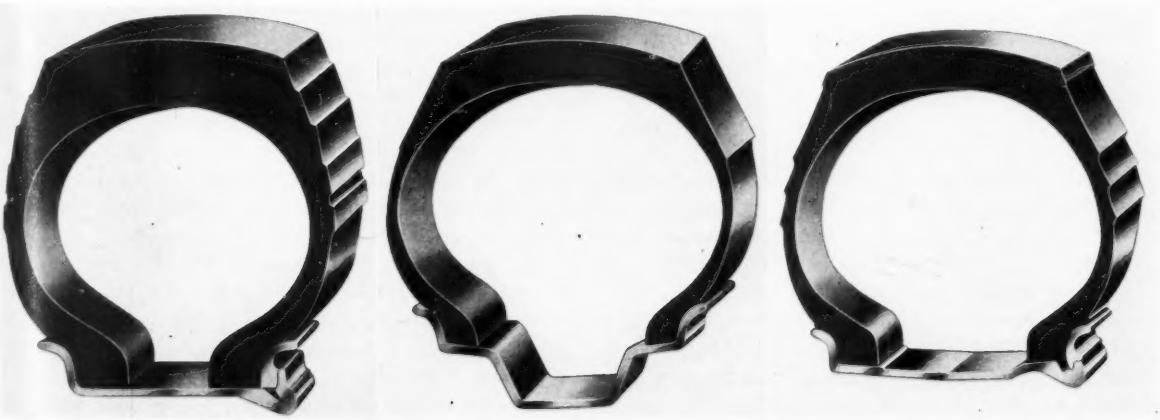
Regular commercial type flat base *rims* are used with the tires and tubes on these vehicles. A cross-section sketch of tire, tube and rim is shown in Figure 13.

Troubles and Remedies

Mounting problems. Bullet-seal tubes are much heavier and stiffer than regular tubes, and sometimes are found to be quite difficult to insert in the casings. The insertion is facilitated by wetting the tube with soapy water.

Balance problems. Scout cars are ofttimes required to operate at high speeds on highways, and tire and tube assemblies are therefore required to be in good enough balance to not shimmy or tramp. Balancing machines are used to balance the wheel assemblies, counter-balances being attached to the wheel or rim opposite the heavy side.

Fast wear. The front and rear wheels of scout cars are loaded unequally. The front tires carry about 2,200 pounds each, while the rear tires carry 3,400 pounds each. Due to the fact that there is no differential between the front and rear axles, the air inflation pressures must be adjusted so that the front and rear tires must have the same loaded or rolling radii. *Forty pounds inflation in the front tires and sixty-five pounds inflation in the rear tires is required.* If equal loaded radii are not maintained, abnormal and excessive wear will result on the front tires.



(13) *Left,* cross section of tire and rim. (14) *Center,* drop-center rim. (15) *Right,* tire on semi-drop-center rim

Punctures. Nails and pieces of steel and bullet holes which do not seal completely may be patched in the usual way with a "cold patch." A vulcanized patch is not recommended for bullet-seal tubes.

Leaky valves. Valve cores which are leaking should be replaced, and as a double insurance against leakage, caps should be securely applied at all times on the end of the valve. Valves which leak around the base cannot satisfactorily be repaired in the field, but should be returned to the manufacturer, who may be able to repair them.

Under-inflation and over-inflation. In addition to causing unequal wear, under-inflation will bring about premature failure of the tire due to weaknesses as result of excessive heat in one case, and in others may result in bruise breaks. Over-inflation has a tendency to weaken the cord strength safety factor causing impact breaks in the body of the tire and may also develop separation of the tread from the body. See illustrations at end of article, for example.

Mechanical misalignment. Results in premature and fast tread wear. Reputable machines are available for determining such misalignment and for correcting same.

(4) *Passenger Cars, Light.* Commercial type highway tread design, *passenger car tires* are used on the above Army units. See Figures 2 and 3.

The tubes used have to date been of the regular type; however, puncture-proof tubes or bullet-proof tubes, as shown in Figures 5, 6, and 7, may be used. Since the passenger car is in itself not armored, it is not felt likely that bullet-sealing tubes are essential; but, on the other hand, puncture-proof tubes would be highly advantageous in reducing road delays due to punctures. It is conceivable that retreating enemy forces would deliberately scatter puncture-producing hazards over all roads, and tires with regular tubes would be quickly punctured on all wheels, and naturally enough spare tires could not be carried. A bullet-seal tube or puncture-proof tube would take care of most of these hazards.

The wheels used on passenger cars are of the standard types commonly used by the public throughout the country. A cross-section of this type drop-center rim is shown in Figure 14.

Troubles and Remedies

Fast wear caused by under-inflation, high speeds, abusive use of clutch and brakes, misalignment of front wheels, etc. The corrections are naturally maintenance of proper inflation, exercising of care by operator, proper alignment.

Punctures caused by nails, scrap iron, glass, pieces of shell fragment, etc. The remedy is to patch the tubes with a hot or cold patch, but the preventive for most of such trouble is as outlined above, the use of bullet-seal tubes or a good, puncture-proof tube.

Balance. Extreme, out-of-balance condition will cause shimmy or tramp, especially at high speeds. The remedy is a careful balancing operation to the tire, tube and wheel assembly, using counter-weights for correction.

Bent or rusty rims. Bent rims are generally the result of accident, but sometimes are caused by hitting small and firm obstructions such as chuck holes in pavements, curbs, etc. Most rims can be straightened, but extreme cases may require replacement of the wheel.

Tire failures. Two types of failures occur predominately. First, impact breaks caused by hitting a sharp obstruction and accentuated by *over-inflation;* and second, by rim bruises, also caused by hitting obstructions and accentuated by *under-inflation.* (Illustrations of these two types of failures are shown in this article.)

(5) *Light Tanks.* The bogie roller and the rubber track, is shown in Figure 11. The speed of thirty-five miles per hour or more puts a very severe requirement on the bogie rollers, and special compounds and adhesion methods have had to be developed by the tire companies. Today the bogie rollers are considered very satisfactory, inasmuch as they have a relatively high mileage life.

The rollers are pressed on the steel bogie wheels and when they need replacement it is a relatively simple operation to remove the wheel, press off the rubber roller and press on a new one.

Not much can be recommended to improve the service of either the rollers or the tracks, except that it has been found that small rocks, sticks and foreign matter become lodged between the bogie roller and the supporting arms, which often wears away the rubber prematurely.

It is also necessary to *keep the proper tension on the track.* This is done by an adjustment on the idler wheel at the rear. The life of the track may be increased somewhat by reversing the direction of rotation, and also turning the track blocks over at the proper time.

Light oils and kerosene used sometimes in cleaning grease from the wheels, suspension parts, guides, etc., *should not be allowed to touch* and remain on the *rubber of the track* or the *bogie rollers,* as this has a definite, deteriorating effect on the tires.

(6) *Command Reconnaissance Cars (Bantam)* ¼-ton, 4x4. This is a new light, low profile, high speed car, recently developed. Much of the success in gaining its popularity has been due to the high-traction pneumatic *tires* with which it is equipped. These are sizes 5.50-16 and 6.00-16, four ply.

The tubes procured so far have been of the regular type.

The wheels are of the integral type, detachable at the hub, drop-center rim. See Figure 14.

Reports from early experiences indicate that flat

tires are already occurring. This points to the necessity of using a puncture-proof or bullet-seal tube.

Other troubles will no doubt show up in the form of bruise breaks, impact breaks, as may occasionally be expected in all types of tires.

(7) *Half-track Vehicle.* This equipment has the 8.25-20 10-Ply mud and snow *pneumatic tire* on the two front wheels, and a continuous *rubber-band track* serving as the rear wheels. The new models have sixteen 12″ x 4″ cured-on type *bogie rollers* to support the weight inside the tracks, eight of these on each side. These tracks and bogie rollers appear to be relatively free from premature failures. Track is shown in Figure 12.

The front wheels are a standard type of truck wheel, which demounts at the hub and has a *flat-base* truck rim integral with it. *The tubes* are of the bullet-seal type illustrated in Figures 5 and 6.

(8) *Antitank Gun, 37-mm.* The *tires* are of the regular commercial, passenger car type as shown in Figures 2 and 14.

Rims are of the standard, drop-center type, as shown in Figure 8.

Tubes are regular commercial type.

There are no particular problems here. The unit is over-tired to the extent that if tires go flat, it can still be pulled considerable distances on its flat tires.

(9) *Field Howitzer, 75-mm. Tires* are of the regular commercial type truck tire for highway use, size 7.50-24 eight-ply, such as shown in Figure 4.

The *tubes* are of the bullet-sealing type.

The *rims* are of the flat-base type.

There are no premature failures, or unusual types of failures, encountered with the tires or tubes on this vehicle. Most of the field guns are purposely over-tired, which almost eliminates any trouble.

(10) *Field Howitzer, 105-mm. Tire* equipment is identical with that of the 75-mm. Howitzer as shown in Figure 4.

(11) *Mortar, Motor Carriage.* This type of equipment is made from two basic types of vehicles: one, the scout car, as described under 3; and second, the half-track vehicle. The *tire and rubber* equipment in the first case is identical with that of the scout car. The front wheels of the half-track are identical with the scout car front wheels, but the rear wheels are replaced with a crawler continuous band rubber track. Inside this track are sixteen (eight on a side) small (12″ x 4″) *cured-on type bogie rollers.* Earlier models used a steel bogie roller. It is felt the continuous-band tracks with the rubber bogie rollers will endure under average conditions 5,000 miles.

(12) *Trucks, Pick-up.* Tires, tubes and rims are identical with half ton 4x4 Command Reconnaissance Trucks. See Figure 3.

(13) *Truck, Half-ton.* 4x4, Command Reconnaissance. Tires—same type of tread is used as outlined above.

The tubes used in these tires are of the regular commercial type, but bullet-sealing tubes may also be used if specified, such as are shown in Figures 5 and 6.

Wheels and rims. This tire and tube are used on the semi-drop-center type of rim, which insures a tight fit of the bottoms of the beads, which is necessary in this size tire to prevent slippage of the tire on the rim. This type of rim is shown in Figure 15.

The semi-drop-center rims used are quite similar in outward appearance to the flat-base truck-tire rims more commonly known. In mounting and dismounting the tires from the semi-drop-center rim, the tire beads must be "buttoned" or "unbuttoned," keeping the one side of the bead in the center well of the rim while the opposite bead is being maneuvered over the side of the rim. The accompanying pictures illustrate this process. Many tires have been damaged at the beads because this feature of the fit of the tire on the rim is not understood.

Complete mounting instructions with pictures are elsewhere given in this article.

Troubles and Remedies

The most prevalent trouble with tire equipment on these vehicles has been in keeping the front wheels properly balanced and aligned. Frequent checking and correction of alignment has been found to be necessary to prevent fast tread wear, as well as to guarantee proper handling.

Balancing has also been a problem with the front wheels of this vehicle. These large section tires and tubes have a tendency to shimmy or tramp if not fairly well balanced. Counter balances on the wheels have been found to be effective as a remedy. See photographs at end of this article.

(14) *Trucks, 2½-ton,* 6x6, Cargo. These trucks are using the *commercial type tire* with a mud and snow tread pattern as shown in Figure 3. Further explanation is not considered necessary.

The *tubes* used are of the regular commercial type.

Wheels and rims are also of standard commercial type. The rims are in most cases riveted or welded to the center part of the wheel, the wheels being demountable at the hub. The rim is the standard, flat-base type, as shown in Figure 10.

Troubles and Remedies

Problems of premature wear, punctures, balance, and hazard failures are of the usual expected nature on this equipment. Recommended inflation, proper balance, valve caps, proper alignment, all help to insure long life of tires and tubes.

(15) *Truck-tractors and Semi-trailers* (Horse Portée Units). This motorized cavalry equipment about which much has been written in a former issue of The Cavalry Journal, depends on a large number of tires of ample size and capacity to enable it to ac-

complish its mission and to cover long distances in short time. The highly developed truck and bus tires adapt themselves to these requirements. Regular highway type treads and regular tubes and rims are used. The use of puncture-proof tubes would be desirable in the writer's opinion.

This equipment is rather new and no unusual troubles have been reported.

Summary of Motorized Vehicles and Gun Carriages Used by the Cavalry Division

The foregoing paragraphs have outlined, more or less in detail, the tire, tube and rim equipment used on the various vehicles. The writer feels that a table summarizing this equipment and incorporating the all-important inflation recommendations should be a part of this article. (See note.)*

How to Get the Most Service from Pneumatic Tires

Much has been said and written concerning the common causes of premature failures and low mileage of pneumatic tires in consumer and commercial operations. It seems worthwhile to repeat briefly, in this period of preparing our nation for national defense, the major factors influencing *tire life*. These are outlined below, with the hope that officers and enlisted men in the cavalry will read and put into practice throughout the motorized and mechanized equipment the recommendations set forth herein.

(A) *FAST TREAD WEAR*

Causes:

(1) *High temperature.* At 100° atmospheric temperature the rate of tread wear is five times as fast as at 40°. Road surfaces become much hotter than air temperatures. Winter driving will result in twice as much mileage as summer driving.

(2) *Speed.* At 60 miles per hour the rubber wears off twice as fast as at 45 miles per hour.

(3) *Horsepower.* Increased horsepower of modern engines results in faster tread wear.

(4) *Road surfaces.* Tread wear varies greatly with the type of road surface. Some apparently smooth types of hard-surface roads are highly abrasive.

(5) *Accelerating and braking.* Sudden stops and starts produce much faster tread wear than easy stops and starts.

(6) *Misalignment.* Wheels that do not run parallel with each other scuff the rubber off prematurely.

(7) *Under-inflation.* A 30% under-inflated tire will give only about 75% of its expected mileage.

Remedies or Suggestions for Improvement:

(1) Keep tires inflated to recommended pressures.
(2) Keep valve caps securely tightened on each valve.
(3) Keep brakes properly adjusted.
(4) Keep wheels in proper alignment.
(5) Keep spare tire in use by alternating it on running wheels.
(6) Change wheel positions every 4,000 to 6,000 miles.

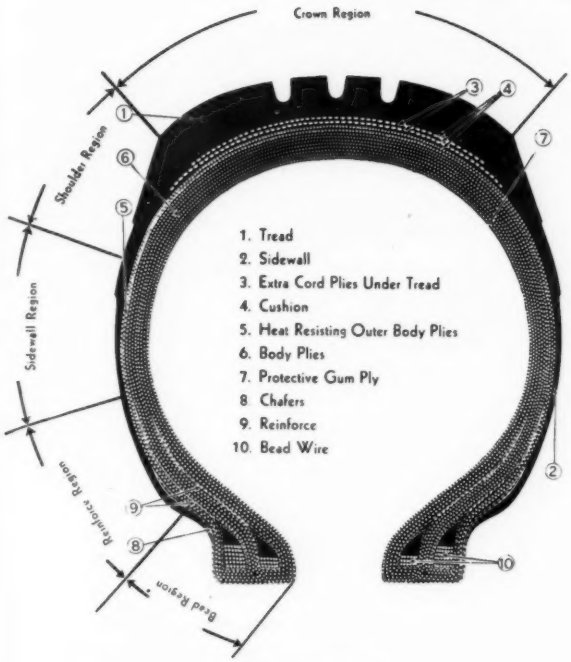
(B) *RIM BRUISES*

Causes:

When a tire hits an object which is solid and sufficient in size, the force may collapse the tread or sidewall of the tire against the flange of the rim. The tendency for this to occur is made more likely when

*Note: Tire, Rim Equipment and Inflation Table.

Unit	Tire Size	Type Tire	Type Tube	Size Rim	Type Rim	Recommended Inflation
Motorcycle, solo	4.00-18- 4	Motorcycle	Regular	18x2.15B	Drop Center	22
Motorcycle, sidecar	4.50-18- 4	Motorcycle	Regular	18x2.15B	Drop Center	22
Scout car, M3A1	8.25-20-10	Mud and snow	Bullet seal	20x5.00S	Flat Base	40 lb. Front 65 lb. Rear
Passenger car	6.00-16- 6	Regular	Regular	16x4.00E	Drop Center	28
Light tanks	20x6x16	Solid bogie roller	None	.....	.....	..
Command reconnaissance car, ¼-ton	5.50-16- 4 or 6.00-16- 4	Mud and snow	Regular	16x4.00E	Drop Center	30 28
Half-track vehicle	8.25-20-10 Fronts Only	Mud and snow	Bullet seal	20x5.00S	Flat Base	60
Antitank gun, 37-mm.	6.00-16- 6	Regular	Regular	16x4.00E	Drop Center	36
75-mm. Field Howitzer	6.00-20- 6	Regular	Bullet seal	20x3.75P	Flat Base	50
105-mm. Field Howitzer	7.50-24- 8	Regular	Bullet seal	24x4.33R	Flat Base	45
Motor carriages	8.25-20-10	Mud and snow	Bullet seal	20x5.00S	Flat Base	60
Trucks, pick-up	7.50-16- 6	Mud and snow	Bullet seal	16x5.50F	Semi-drop-center	40
4x4 Trucks and Command reconnaissance car, ½-ton	7.50-16- 6	Mud and snow	Regular	16x5.50F	Semi-drop-center	40
6x6 trucks, 2½-ton	7.50-20- 8	Mud and snow	Regular	20x5.00S	Flat Base	55
Tractor trucks and semi-trailer	9.00-20-10	Regular	Regular	20x6.00T	Flat Base	60
Trucks, wrecking, 4x4	9.00-20-10	Regular	Regular	20x6.00T	Flat Base	60



(16) Nomenclature

pressures are below those recommended. Such bruises occur in new tires as well as in old ones. The tube does not necessarily immediately puncture, but will puncture or blow out soon thereafter.

A typical failure is shown in Figure 17.

Remedies or Suggestions for Prevention:

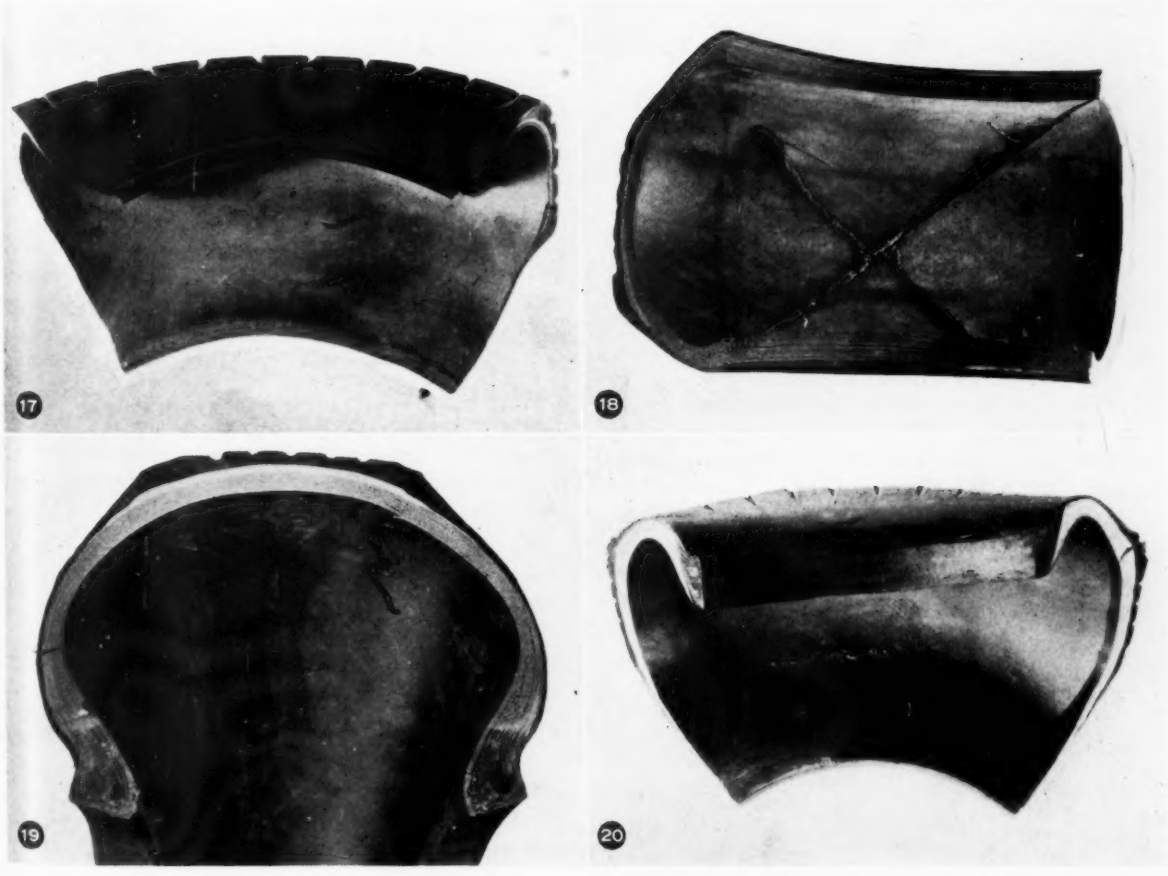
(1) Keep tires inflated at recommended pressures.
(2) Avoid hitting curbs, stones, stumps, etc., with the tires.
(3) If the injury is in the upper sidewall or tread, or shoulder region of the tire, repairs may be successfully made.

(C) *IMPACT AND HEAT BREAKS*

Causes:

Long-distance running with heavy loads and often augmented by under-inflation, result in tires becoming too hot. This heat weakens the cord body strength, lessening its safety factor. The tire may then strike an obstruction, and in its weakened condition rupture the cords. The shape of the break is a diagonal or "X." These are shown in Figure 18.

High, sustained speeds and overloads develop a third type of break, known as the crown break. An



(17) Rim bruises. (18) Impact and heat breaks. (19) Crown break. (20) Overload or flex break

illustration of this is Figure 19. An obstruction does not necessarily cause this failure.

Suggestions for Prevention:

(1) Maintain proper air pressure when tires are cool. (Do not "bleed," i.e., release air, when pressures build up.) It is normal for tires to become warmer while operating, which results in an increase in pressure. Most United States Army vehicles, as used by the cavalry, are properly tired, and overloading is not often the cause of tire failures.

(2) If overloads are frequently encountered and cause this type of tire failure extra ply tires or tires made of rayon are recommended. Rayon cord does not weaken under heat as much as cotton.

(3) This type of break is not repairable.

(D) *OVERLOAD OR FLEX BREAKS*

Causes:

Overloading is the principal cause although under-inflation may also cause it. The break occurs in the lower sidewall region or the upper sidewall and shoulder regions, as shown in Figure 20.

Remedies and Recommendations for Prevention:

(1) Keep tires inflated to recommended pressures. (Do not overinflate.)

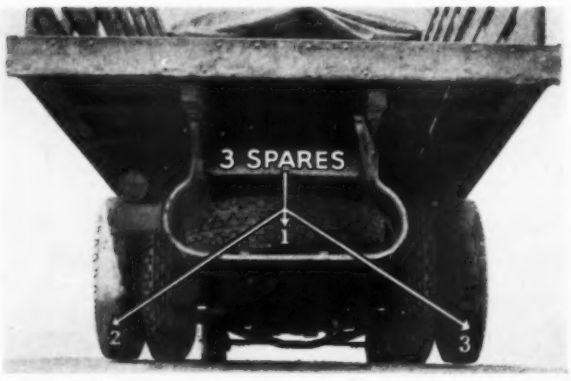
(2) Keep dual tires properly matched.

(E) *MISMATCHED DUALS*

The illustration below clearly points out this malpractice. If a truck is designed to carry a load on four tires, two tires certainly should not be expected to do almost all of the work. Mismated duals often cause premature failures such as crown breaks, flex breaks, and impact breaks. See Figure 21.

(F) *DAMAGE DUE TO RUNNING FLAT*

It is the air in the tire that carries the load; the tire merely serves as a container for this air. If a tire is allowed to run almost deflated or completely deflated



(21) Mismated duals

(22) Damage due to running flat

severe damage quickly results. This is shown in Figure 22.

Tire, Tube, and Wheel Balance

Most military equipment is designed to operate on the highways at about thirty miles per hour average. At this speed, troubles with shimmy and tramp, due to extreme out-of-balance conditions, are not likely to occur. However, some vehicles, namely, motorcycles, scout cars, passenger cars, one-quarter- and one-half-ton command reconnaissance cars often do attain fifty to sixty miles per hour, at which speeds a fair degree of balance is necessary to prevent shimmy or tramp.

Even though tire, tube and wheel assemblies are in good balance when new, service wear, changing of tubes due to punctures, etc., may soon result in a troublesome out-of-balance condition. It is practical to rebalance such tire, tube and wheel assemblies by placing the wheel on a static balancing jig, determine the light point of the assembly and fasten a specially designed counterweight (or weights) to offset the heavy part diametrically opposite. These weights are easily attached to the rim and generaly are put on the inside so that they will not show and they will not become brushed off.

Sometimes tires are worn with extreme flat spots as result of bad, out-of-balance condition, eccentric brakes or sliding and it is difficult to offset the bumping action which these flat spots cause.

Proper balance is most necessary on the front wheels, but in some cases rear wheels out of balance will also cause shimmy trouble which appears to be caused by the front wheels.

Remember that shimmy and tramp conditions may be cause by misalignment, damaged wheel geometry, bent steering arms, loose parts, unequal shock absorber adjustments, and other mechanical maladjustments.

The high-speed vehicles should be constantly checked for proper balance of the wheel assemblies. This will reduce spotty tread wear, improve tire mileage, bring about stability at high speeds as well as help to eliminate shimmy and tramp vibration.

Methods of Mounting and Demounting Tires and Tubes on Rims

Rims fall into three general classifications: (1) drop-center rims; (2) semi-drop-center rims, and (3) flat-base rims.

(1) *Drop-center Rims*

Correct method of mounting tires on drop-center rims:

(1) Insert tube in tire.
(2) Barely round out with air.
(3) Force inside bead over top of flange by "buttoning-on" action.
(4) Force second bead over flange of rim in the same manner, using flat, dull, tire tool to assist "buttoning-on," prying action.
(5) Center tire as near as possible, concentric with tops of rim flanges, both sides.
(6) Inflate tube through valve until beads of tire are forced tightly against flanges of rim.
(7) Check to determine if beads are in proper place as indicated by centering rim near top of flange.
(8) Completely deflate tube.
(9) Inflate tube to recommended pressure.
This procedure will eliminate buckling of tube between beads.
(10) Securely fasten valve cap.

Correct method of demounting tires from drop-center rims:

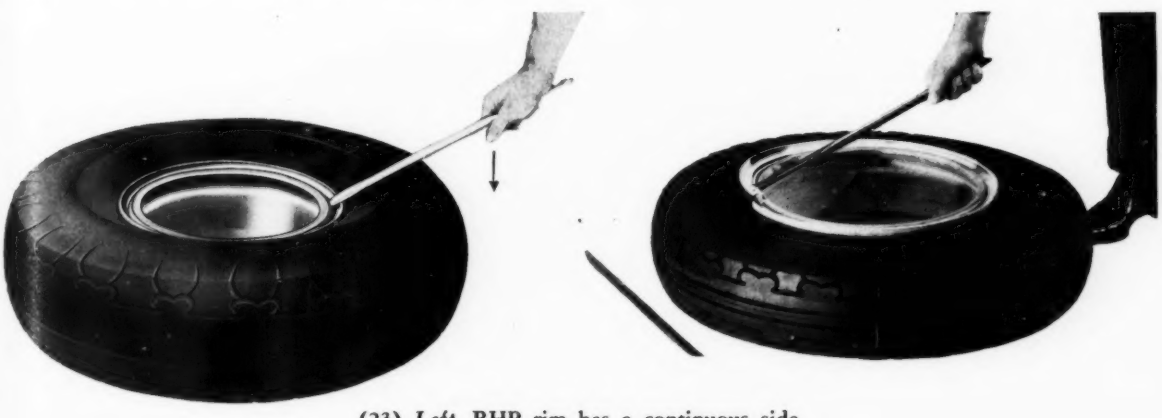
(1) Remove valve core and deflate.
(2) Loosen beads of tire from both flanges and bead seats, by forcing toward center of rim.
(3) Force one side of outer bead into well of rim and pry diametrically opposite side of same bead up and over flange, with flat, dull tool.
(4) Holding this "bite" pry with second dull, flat tool, progressive portions of the bead over the flange, until the whole bead is outside of the rim.
(5) Pull out inner tube.
(6) Working from other side, pry second bead over the same flange, in the same manner as the first bead.

(2) *Semi-Drop-Center Rims*

There are two current makes of semi-drop-center rims, known as RHP and LTS. The slight drop-center well in the center of the base must be utilized in mounting and demounting tires similar to drop-center rim. Figures 23 and 24 should be studied by operators before trying to mount or demount tires on these rims. Operators often mistake this rim for a flat-base rim and do considerable damage, sometimes ruining the bead of the tire.

Correct method of mounting tires on semi-drop-center rims:

(1) Being sure that no dirt or foreign matter is in the tire, insert tube and flap.
(2) Lubricate beads and rim with vegetable oil soap or soapy water. (Do not use oil.)
(3) Inflate tube, barely rounding out. Too much air will make mounting difficult.
(4) Place tire on rim with valve in line with valve hole, and insert valve through hole.
(5) Force first bead into well of rim adjacent to valve, and pry remaining portion over gutter of rim with thin, flat, dull tire tool.
(6) Apply second bead, starting at point opposite valve.
(7) Force and hold this position of second bead into shallow well near center of rim section.
(8) Holding this into place, pry with "buttoning-on" action and short, progressive steps, with thin, dull, flat tool, remainder of bead over gutter side of rim.
(9) Apply loose side ring (RHP side ring is a continuous ring, which requires a "buttoning-on" method; and type LTS side ring is a split type ring, which requires application by inserting one end into gutter and progressing with tire tools around complete circle of rim.
(10) Being sure rings are properly seated in gutter



(23) *Left,* RHP rim has a continuous side ring. (24) *Right,* LTS rim has a split side ring

and tire is concentric with rim, inflate to recommended pressure.

(11) Apply valve cap.

Method of Demounting:

(1) Remove valve core to deflate.
(2) Using tire tool, pry inward side ring until this bead is free from bead seat.
(3) Pry out and up on side ring removing it from base (the RHP continuous side ring requires an "unbuttoning" action; the LTS split-side ring is removed by prying up and over gutter one end and progressing around the rim until flange can be lifted off.
(4) Pry loose bead on other side of rim.
(5) Force one side of bead toward center of rim and holding same, pry opposite side of same bead up and over gutter of rim with "unbuttoning" action, progressing with second tool pry remainder of bead over gutter.
(6) Loosen other bead from flange by prying same toward center of rim.
(7) Remove tube and flap.
(8) Lubricate with soapy water second bead, to facilitate its removal.
(9) Being sure that one side of the second bead is in well or depressed part of rim, pry opposite side, up and over gutter, with flat, thin, tool. The tire should fall from the rim with little effort, with "unbuttoning" action.

Note: It may not be absolutely necessary to remove second bead, if same tire is to be used again on same wheel.

(3) *Flat-Base Rims*

Little difficulty is ever encountered with this type rim, in mounting or demounting tires, because it has been used for such a long time. Furthermore, the flat-base tires which fit on the flat-base rims are slightly larger in diameter at the bead seats, allowing the tires to slip on and off without much difficulty. Sometimes rust forming on the rims makes it a little difficult to remove tires.

Diagrams of the flat-base tire and rim sections are shown under illustrations Nos. 10 and 13 in the preceding paragraphs.

Tools

A recently developed pair of tools has been put on the market which should be in every tire changer's equipment. These are known as the Miracle Tire Remover. See Figure 25. These two tools are found to be extremely effective in handling the tires both demounting and mounting, on all three of the foregoing rims. They are particularly effective in breaking loose "frozen" or "compression fit" beads from their respective rims.

(25) Miracle tire remover

Crowd Psychology*

By Major N. B. Thompson, Jr., Cavalry

CURRENT history indicates the possibility that potential forces may now be established in this country and that in the event of war, these forces could cause considerable confusion.

Certain Corps Areas are exceedingly vulnerable to invisible forces due to the large registration of aliens and the many sensitive points covered by transportation, rail, aeroplane, and bus, particularly in and around the larger industrial centers.

The whole structure of civilized life is in peril.

Here are problems of plenty and of deficiency, of war and of peace, which are the problems of today—many problems which the world has never before been forced to meet.

In these hurried days the daily scene crowds out efforts of long-range thinking. Yet it is only by looking ahead that we can seize the initiative. Today, as never before, officers can see the need of living and working in harmony with their brother officers. The merry-go-round is whirling so fast that questions are not settled, but are forgotten.

Even where men are fighting for their very existence, they look beyond their immediate struggle to the challenge of the future. The springs of actions in men are many sided. Most men will generously help out a stranger in need, then will go home and quarrel with a member of the family over a trivial question.

The relationship of man to man is one thing; the relationship of grouped men is something else again. Their impact on the world can hardly be exaggerated.

Freedom and power then are our twin heritages and as we use or misuse them, so will civilization of today stand or fall.

Side by side with the headlong pace of industrialization with its tremendous benefits and its unforeseen problems, we find hundreds of thousands of aliens whose ideas are various, including the dissemination of defeatist and pacifist ideas, labor agitation, appeasement doctrine, in one form or another, as well as the run-of-the-mill activities of spies and saboteurs; these subjects are today associated in the public mind.

This group consists of individuals who have no apparent hostile intent, but who are prepared to assist foreign powers in various ways and at a time most advantageous to the foreign power. There is no more timely a subject today than that of "Crowd Psychology" because of the ease in which crowds are assembled. One of the reasons for this is that we are washed by a steady stream of news and advice. This is the phenomenon of an awakening world and at the same time one of the means of its awakening.

Pick up any magazine in the average home and page through it. What can you read provided you have the time? As an example, *Fortune* (October), "The War of Nerves, U. S. Front." Hitler's secret weapon has been turned against the U. S. You may find yourself a casualty, for in this kind of war, everyone is in the front line trenches. *Look* magazine (December), "How Hitler Fools America." He has a pretested plan to conquer the U. S. *Click* (January, '41), "These Women Betrayed France." The *Saturday Evening Post; Time,* any week; the *Ladies' Home Journal,* others too numerous to mention here. There are too many points of view irreconcilable to any single system.

As for newspapers, the press is full of "Crowd Psychology." There are the *New York Times; Cincinnati Enquirer; Louisville Courier Journal; Times Picayune; New Orleans, Chicago Tribune,* or *San Francisco Chronicle,* each issue of which magnifies the enormity of the subject.

The radio—well the ether is so full of the discussion of "Crowd Psychology" that it naturally brings it into your home, forming there another circle of friends discussing the educational or authoritative influence of the commentator.

The aeroplane has finally entered the picture as a means of distributing literature from the skies, announcing policies and ideas, anti or pro-British, Nazi, Italian, Russian, Chinese or Japanese.

Thousands of tons of propaganda from the printing presses of Germany, Russia, Italy and Japan are being poured annually into the United States to say nothing of the British propaganda mainly produced by "committees" in this country.

Does it then seem incredible for the United States as a nation to have been won over to this subject? The whole world is seething with "Crowds."

Can this subject then help us to understand part of our field problem long before we enter the "Zone of Interior" or the "Theater of Operations"?

Such preparedness is classed today with "Power of Command," which all Cavalry officers must exercise, not only from a Military standpoint, but from that of the individuals or crowds with which we come in contact. An aversion to the European variety will be of little help to us, so a study of propaganda of all species will be helpful.

Speed, vigor, cohesion, and preparedness is necessary

*From a lecture to Cavalry-Reserve officers. Major Thompson is Assistant Provost Marshal, Sixth Corps Area.

in everyday life. In every community of 5,000 population or over, there are safety departments, either police or fire, always on the alert, in readiness, so in this cock-eyed world of today others look to us to be prepared for any emergency, so that is part of each officer's duty. Fortunately for us, we have the opportunity to see the working methods at work so we have time for counter-defenses, which will have an equal chance of success.

The Individual

Before discussing "Crowds," take a brief look at, and have contact with the individual:

He has emotions.

He loves someone—others he hates.

He fears some and approves of others.

He is joyful in one meeting—sorrowful in another.

We share these emotions. We even spread them. In other words, these emotions are contagious. Whether your college athletic team is victorious, or the presentation of a trivial gift, the gift of a new automobile, elevation to public office—all are emotional.

Just take a look at individual types of unwitting agents of foreign powers. Here we have the persons of undoubtedly good will, but with inadequate awareness of the consequences of their doings—like some of the foreign statesmen trying to put over peace plans.

Then we find people whose good will may or may not be beyond suspicion, but who try to outsmart the leader. They realize they are being used, but they think they are smart enough to use the leader instead. Nobody outsmarts leaders in this respect, but it does not seem to prevent individuals from trying.

While last, but not by any means the least, there are individuals who would turn their own country over to a foreign power rather than permit domestic opponents to gain control, as some of the European nations have experienced.

The Average Man

Data from the induction centers are not summarized today, but we do have available data from the draft army of World War No. 1, regarding the capacity of the average man then, and it is interesting.

The tabulation covers many subjects, so briefly we will review a few subjects revealing the record of the average male citizen of 1917-18 as a composite:

Height	About 67 inches
Weight	About 150 pounds
Brain Weight	About 1,300 grams. 2% Body Weight
Daily Sleep	About 9 hours
Age at Death	About 53 years
Age at Marriage	Early
Number of Children	3 or 4
Education	6th Grade
Average Mental Age	14 Years

With such an average person to work with in 1917-18, and as yet no record for 1940-41, the strength of any suggestion depends in part on the degree to which it seems to be of spontaneous origin, an act of the individual's own initiative.

There being so many children to contend with today, we will look at the child:

Age of Impression	*Age*
Laughter, Glee, Amusement	3
Pain, Suffering	6
Fear, Terror	8
Defiance	10
Pity, Sympathy	11
Impulse, Surprise	12
Wonder, Suspicion	Adult

With these two groups, arrogance and domination are at once instinctively resented and resisted.

Laws of Suggestion

The more direct the suggestion, the greater is its dynamic power. Within the limits of the law just indicated, the dynamic power of a suggestion will be greater the more forcefully and vividly it is presented.

It is more effective to suggest the desired response directly than it is to argue against a response that is not desired. Suggestion is most active at its positive pole, and the negative suggestion tends to defeat its own purpose.

Crowds

Not every gathering of people displays crowd mentality.

This word, "Crowd," must be understood to mean the peculiar mental condition which sometimes occurs when people think and act alike, either immediately where the members of the group are present and in close contact, or where they affect one another in a certain way through the medium of an organization, a party, or the press.

Looking about today in any community, we cannot, if we are the least observant and inquiring, fail to be impressed by the immense crowd phenomena. It may be around the news stand, the parks, the curbstones, any public building. It is simply a sudden and spontaneous clustering of people.

We cannot escape the fact that smaller and larger numbers of people gather from divers directions, cluster at more than one point, then melt away like ice in the sun, leaving scant traces.

These clusterings are often more representative of that which will soon appear as a broad movement of people struggling for something they do not have, even the workers rising against their employers. We cannot overlook these matters because as officers it is our duty to examine everything of a social nature.

Most crowds act instinctively and each instinct, with its effective emotion, becomes organized through complex reactions to the social environment into sentiments which are the controlling forces. Nothing is more unpredictable than an emotionally excited crowd.

Mobs

Contrary to prevailing opinion, a mob is not disorderly or disorganized. It is organized into precisely that kind of a machine, for the reason that it is better capable of extreme vigor. All orders flow from the top down, and responsibility for obedient execution flows from the bottom up. Mobs do not differ from crowds in composition, but in function.

Most of our waking time we spend midst the crowd; the hum of the city; the shout of men; to hear, to see, to feel, to possess. The crowd is the creature of belief. Their ideas are real to them, just as the colorblind man's sensations of color may be as real as those of normal people. The crowd is not merely a group of people. It is the appearance within such a group of a special mental condition or crowd-mind. The sentiments and ideals of all persons in the gatherings take one and the same direction; conscious personality vanishes; a collective mind is formed. Crowds may be temporary or permanent in their existence. It all depends upon you and your actions.

Find the location where newspapers are given away. Some leader, if not there, will instinctively appear to determine your interest. Both the individual and society suffer from crowd behavior. Even civilization is menaced by behavior of crowds. The crowd is the creature of belief, so crowds should be broken into small units as quickly as possible.

It is conceivable that every crowd is against someone. A similar uncommon impulse motivates a crowd. A crowd is a device for indulging ourselves in a kind of temporary insanity by all going "nuts" together.

Thomas Carlisle was very sound when railing at the "paper age." Paper, as he wisely asks us to remember, is made of old rags, and is identified with the crowd. The desires of the crowd are to better themselves and that selfishness is multiplied by numbers and gains momentum as the crowd increases. When a flock of birds migrate from one place to another, the leader is never out in front. He has an advance guard who sets the pace, while he directs them from the center. Thus he makes the other birds feel that they are the leaders. This is typical of all "crowds."

CAVALRY HOME STATIONS

Cavalry Replacement Training Center

By Lieutenant William P. Jones, Jr., Cavalry

IT is very fitting that an article about the Cavalry Replacement Training Center should begin with a tribute to its Commanding General. Brigadier General Harry D. Chamberlin, who assumed command here on April 28, 1941, is one of the outstanding horsemen in the United States. He has been a member of the American Equestrian Team at three Olympic Games, and captain of the Army polo teams that won the twelve- and twenty-goal championships in 1926. He has been a student at the French Cavalry School at Saumur, at the Italian Cavalry School at Tor di Quinto, and later went as an observer to the English Cavalry School. During the War he served with the 81st Division.

In recent years, prior to his promotion and assignment to the Cavalry Replacement Training Center he commanded the 1st Squadron of the 14th Cavalry, served as G-3 and Chief of Staff of the Cavalry Division, and just released command of the Second Cavalry. He has, for years, been intensely interested in all training problems.

Shortly after General Chamberlin's arrival at the Cavalry Replacement Training Center, a reception, attended by all the officers of the Center and guests from Fort Riley, was held in his honor at the Service Club. Incidentally, this occasion also constituted the opening of the Service Club building.

* * *

By the time this account reaches the public eye, the Cavalry Replacement Training Center will have been training selective service men for over two months. During this time we have learned many things. We have made a few mistakes, to be sure, but on the whole we feel that our work is shaping up. The 5,277 selectees in our first contingent looked anything but soldiers when they arrived. Now, after two months, their chests are out and their chins are up. They appear soldierly, obey promptly, and are rapidly absorbing a good foundation of basic military knowledge. The proof of the pudding, however, will be the conduct of these men when they reach the regiments. If, on that fateful day, they find that they are on familiar ground, and if they are able to take up the normal work of a soldier and do it in a satisfactory manner, we at the Training Center will know that we have done a good job.

Selectees in this first group have done their work well. They have acquitted themselves like men. There has been no grumbling nor dissatisfaction with their lot.

Classification

It is the mission of the Classification Section to forward to the unit receiving the trainee a complete record of the nature of training he absorbs at the Replacement Center and the best possible indication for future assignment. This will be based on factual knowledge of his individual skills, both military and civilian.

Cavalry selectees in this first contingent to arrive at the Replacement Training Center have been sent to us from all parts of the nation. They represent 37 states. The bulk of them, however, come from the great centers of population in the East: New York, New Jersey, and Pennsylvania, with Ohio and the Great Lakes states running a close second.

The Classification Section has functioned from the beginning to place men in accordance with their qualifications and desires, so that they may receive the greatest possible benefit from training. Each man, as he arrived from the Reception Center, was interviewed briefly and then assigned to a horse or motors unit. This assignment was based on his past employment, his own desires and the needs of the service.

The initial assignment of the selectees was not in itself a classification process. It furnished the basis of classification by placing men in proper organizations so that their own enthusiasm and desire to make soldiers of themselves would not be frustrated by improper handling. The actual classification is a continuous process which is taking place day by day. Reports from the squadrons and departments indicating ability in various fields are the basis of proper classification.

Because of many factors over which they had no control, the Reception Centers were unable to fill requisitions of this Replacement Center with the prescribed percentages of occupational specialists. In a number of cases, the first steps of the classification processes, handled by the Reception Centers have been found faulty. In general, however, considering the speed with which they have found it necessary to work during induction, the qualification cards have been excellent. The Classification Officer at the Cavalry Replacement Training Center has found it necessary.

however, to spend some time correcting errors and adding additional information which the Reception Center interviewers had been unable to get. The Classification Section is now in the process of giving mechanical and clerical aptitude tests to those individuals who have experience or who show promise along these lines. Information from the troops and departments is also being entered on the qualification cards, and it is expected that military specializations can be coded on the cards during the latter half of May. As explained in previous articles, the mission of the Cavalry Replacement Training Center is the training of *basic cavalry soldiers*. Thus the military specialists required by units will, in general, have to be trained by the units receiving them.

Brigadier General Harry D. Chamberlin, commanding general, Cavalry Replacement Training Center

General Scheme of Operations

The Master Training Schedule, as devised by the Replacement Center's S-3 Section, is the father and mother of all training schedules. After many false starts and much labor it was completed and approved. It is a most thorough and detailed document, giving lesson assignment, type of instruction, areas in which the instruction is to be given, and the uniform and equipment necessary, for every organization in the command, every training hour of every day for 12 weeks. But with all this detail, there is enough open time to allow for the minor adjustments that may become necessary from time to time. During the first thirty minutes of the morning drill period from Monday to Friday, calisthenics are held. These exercises are attended by the officers and other members of the troop cadre. The remainder of the morning is divided into two periods of 2½ hours each. There is another 2½ hour period in the afternoon, giving three periods in the training day. The selectee personnel is therefore divided into three groups for training.

Let us take, for example, "A" Troop of the 2nd Training Squadron and follow it through a typical day's work. The day selected is Monday of the sixth week—April 28th.

After a half hour of calisthenics, the first period, from 7:00 a.m. to 9:30 a.m., is devoted to basic training. The first half hour calls for dismounted drill including combat formations. The next hour's assignment is in Map Reading and Conventional Signs and the last hour is given to offensive Combat Training. The second period, 9:30 until 11:50 belongs to the Department of Weapons. This instruction is not subdivided into two or more subjects, but is all devoted to mechanical instruction with the pistol. For the third period of this training day, Troop "A" of the Second goes to the stables for instruction by the Department of Horsemanship. For the first hour they have mounted drill. The second hour is given over to scouting and patrolling, mounted, and the remaining half hour is devoted to the care of animals and equipment. Similarly, Squadrons comprising the other two groups take up simultaneously, training in one or the other of the three types of instructions shown above but in different sequence. These periods are devoted to training in basic subjects or functional as to weapons, horse or motor. Three and one-half squadrons receive motor instruction while the other four and one-half squadrons receive horsemanship. All trainees receive the same basic and weapons courses. In all, the problems of schedule coördination are well cared for by the Master Schedule. Very little supplementary work along this line is required of the organization commanders.

Horsemanship Department

The Horsemanship Department has been functioning to make riders out of men who have had no previous experience with horses. In fact, many of them, selectees from the metropolitan areas, have seen horses only on the screen or attached to milk wagons.

The Cavalry Replacement Training Center has 1,600 horses. Half of these are "gentled remounts" and half are regimental horses that were ordered sent to the Cavalry Replacement Training Center on the basis of their suitability for recruit work. The Fort Robinson and Fort Reno Remount Depots sent cold blooded animals. These were in good flesh, gentled, and in general well suited for the work at hand. The horses received from the regiments are not nearly as suitable as the remounts.

The saddle equipment is unmodified McClellans,

model 1918. These saddles will eventually be modified, but until such time as this can be accomplished they are being used as they are.

Instruction is given by sergeant and corporal instructors under the supervision of Department officers. Each N.C.O. instructs a group of approximately twenty-five selectees. Department instructors are assisted by officers and N.C.O's of the training troop.

The stables are cavalry type stables and not converted motor sheds. They have center aisles and adjoining corrals. Two buildings comprise a stable unit capable of taking care of 104 horses. The unit has its stable gang consisting of a stable sergeant, an orderly, saddler, and teamster. It is supervised by an officer. The stables have dirt floors, single stalls, windows for each stall and ventilators in the roof.

Each stable unit has forage space, an adequate saddle room, and a saddler's shop.

Many essential supplies have been slow arriving. For a long time shortage in Post supplies did not allow the issue of boots and breeches. This shortage of boots, and the resultant sore legs, necessitated the reduction in training of all gaits to a walk during the latter part of the second week. This general reduction of gaits supplemented by voluntary individual increased gaits and accompanied mass trotting and galloping in equitation rings, seemed generally to restore the confidence of many of the timid riders. Now, that boots and breeches have been issued to the bulk of riders faster gaits have been resumed and instruction seems to be going more smoothly.

In the Horsemanship Department, an effort is being made to build up a vocabulary of expressions from the everyday vernacular of the instructor cadre. It has been found that these expressions frequently work where long winded explanations are lost effort. Such expressions as: *Steer a horse as you would a bicycle; To trot, you bounce once while the horse bounces twice; To step on the gas, squeeze with your legs; No hump backs; Finger your reins;* have been found exceedingly useful.

Classes are being held twice weekly for all troop officers and N.C.O's. This is being done in order to orient them and better qualify them to assist in horsemanship instruction.

During the instruction of trainees, two or three different points are emphasized daily, such as the proper adjustment of the bits, position of the lower leg, position of the hand, etc. Each day the instructors are handed a slip on which is written the things to be stressed the next day.

Plans are being made to procure for all platoon barracks buildings wooden horses with movable necks and heads. They will be equipped with saddles and bridles so that instruction in "seat and hands" can be given outside of normal training hours. This procedure has been found very beneficial for selectees undergoing recruit instruction in the 3d Cavalry Brigade.

Motors Department

"The objective of the Motors Department's twelve weeks course of training at the Cavalry Replacement Training Center is to produce an individual soldier with a thorough knowledge of first echelon maintenance of military vehicles, and the principles of correct, safe and careful operation of scout cars, military trucks and other military motor vehicles, a knowledge of convoy operations, field expedients, motor park and road rules, and with as great proficiency in the application of first echelon maintenance and the operation of the vehicles as the limited time, the limited number of instructors and the large number of vehicles permits."

The above quotation is from a memorandum put out by the Chief of Motors to the instructors of his department.

At first the Motors Department was severely handicapped by a shortage of vehicles. When training started there was only 40% of authorized truck transportation available and no motorcycles on hand. By the fifth week additional trucks had been received. One half of the prescribed allotment of motorcycles, 22, in all, arrived in time for such training to start on the seventh week of the course. Because of this shortage of vehicles, it was necessary to divide the trainees initially into two groups, one for trucks and one for scout cars, rather than the three groups originally prescribed, which would have included one group for motorcycle instruction. This resulted in a large number of trainees per vehicle than was originally intended in the scout car and truck sections.

Preliminary rifle marksmanship

At first, since the scout cars outnumbered the trucks two to one, some of the scout cars were placed in the truck section in order to equalize groups. One-half of the small motor vehicles, consisting of motor tricycles or Bantams have not yet been received.

The number of vehicles allotted to the Center will have to be increased to permit maximum efficiency in training.

At the present time there are approximately seven trainees and one instructor to a vehicle for each of the three periods of the day. These men go out for the day's training and rotate at the wheel so that every man drives some each day.

For the first few days of training the vehicles were jacked up on blocks and the instruction was given by "dry driving" methods. When he saw the set-up, one selectee was heard to remark with disgust, "Here I've spent the last five years tooling a ten-ton truck through the narrow streets of New York. I come out here in the wide open plains of Kansas and they teach me to drive a truck on blocks!" Now, after being initiated into the mysteries of cross country driving, he agrees that it was a sound idea.

The following letter was sent by the Chief of Motors to commanding officers of all nine horse-mechanized regiments.

"Dear Colonel,

"With the thought that it may be of interest to you, I am attaching two copies of the Training Program and Lesson Material which will be used initially by the Motors Department in the training of selectees at the Cavalry Replacement Training Center.

"Because of the large number of men to be trained, and the limited number of instructors and vehicles provided by the Tables of Organization, training is necessarily limited to a thorough knowledge of the principles of first echelon maintenance, and the safe and careful operation of scout cars, trucks, and motorcycles, the execution of simple drill formations, a knowledge of convoy operations, and motor park and road rules. As much time as possible is devoted to the application of maintenance and operation of the vehicles, but, as skill characteristic of the finished motor vehicle operator comes only with continual practice and experience, no attempt will be made to turn out finished operators.

"We plan, of course, to make changes as experience dictates their advisability, and we would appreciate receiving any suggestions or comments you may care to make concerning our objectives and procedures.

"If there is any further information you would like to have concerning our work, please do not hesitate to let me know.

"Very truly yours,

"Harold G. Holt,
Lt. Col. Cavalry."

Not as many motorcycle drivers will be trained as originally planned. The first directive was that all Motors trainees would be trained in the operation and maintenance of either the motorcycle or the motor tricycle (or Bantam). Now, however, due to the lack of equipment and the late arrival of the motorcycles only approximately 1/6 of the total will be trained as solo motorcycle operators.

Each group spends sixteen of the sixty lessons with each vehicle, including some time on vehicle drill. The remaining twenty-eight lessons will be spent in cross country driving, field expedients, marches and convoy operations, use of weapons, the demonstration of the use of weapons, semi-trailer operations and rail movements.

Weapons Department

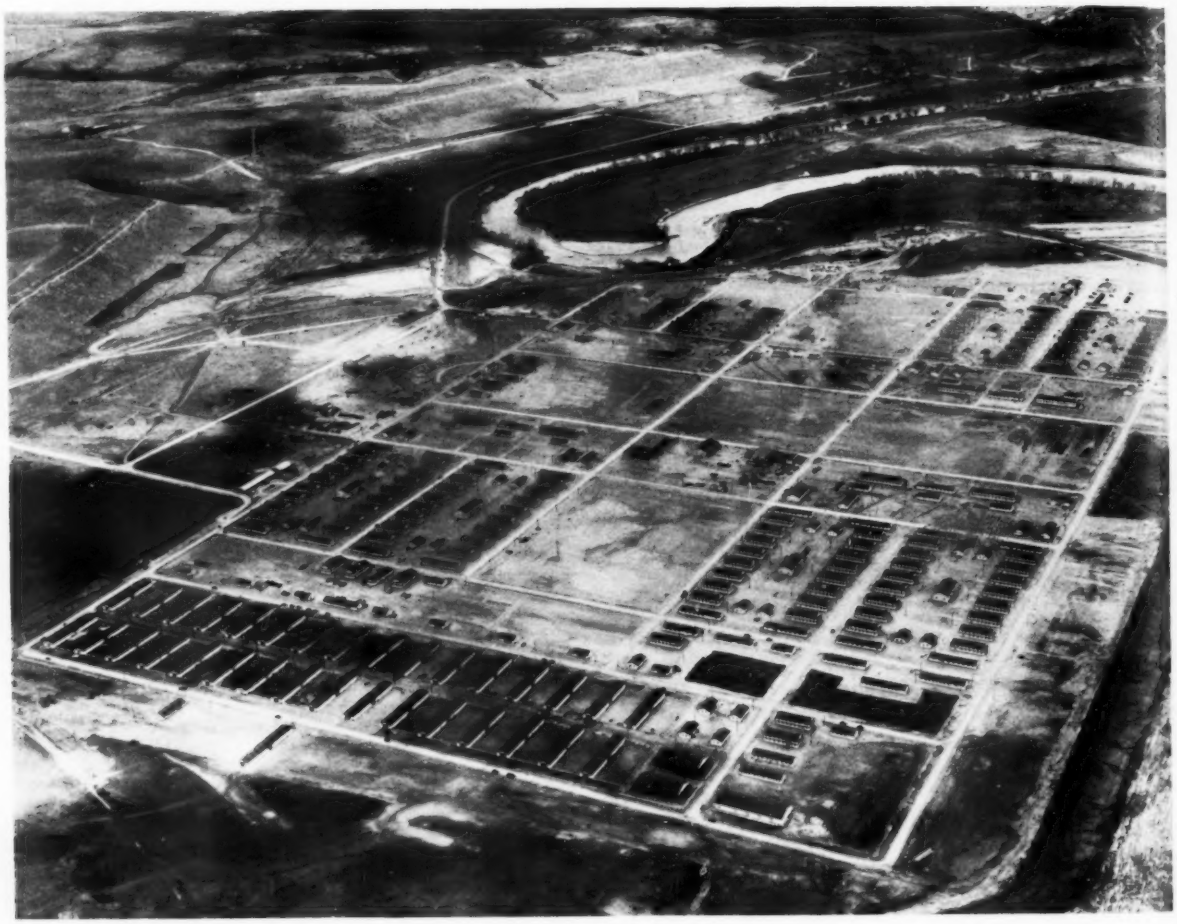
The results of the Weapons Department instruction more or less speak for themselves. All trainees have completed training and record firing with the M1 rifle and at this writing are on the range with the caliber .30 machine gun and the caliber .45 automatic pistol.

Trainees are picking up the manipulation and nomenclature of the various weapons with surprising rapidity. Of course not so much emphasis is being placed on technical nomenclature, but they are taught to strip the pieces and roughly understand the function of the various parts.

When on the rifle range, one selectee was afraid of his rifle. He didn't want to fire it. It seems he had heard lurid tales about the severe recoil of the old Springfield and he just could not believe that the new rifle didn't kick just as much. With infinite patience, the instructor kept the frightened selectee on dry runs with dummy ammunition, each simulated round being carefully squeezed off. Finally, after several clips of dummies, the instructor quietly slipped a live round into the clip. When the live round came up, the trainee squeezed it off as carefully as the rest and scored in the black. He was so delighted with the results and the fact that the weapon really didn't kick that he wanted to go on shooting long after his order had finished their firing for the day.

Qualification percentages with the rifle showed a steady increase with each succeeding week. Whether this was due to a difference in the quality of the selectees, or a difference in the quality of the instruction, is open to conjecture, but we believe it safe to assume the latter. That may be coupled with the fact that weather conditions improved steadily on every qualification day. The first was characterized by a twenty mile wind, varying between 3 and 6 o'clock, and intermittent rain. The second qualification day lacked the rain and on the third, conditions were ideal. It is unquestionable that with experience, the instructors performed their duties in a much more efficient manner.

The first group to fire for record qualified 50.9% with only 6 experts and 50 sharpshooters. The second



From the clouds

group increased the qualification to 61.8% having 12 experts and 65 sharpshooters. The third and final group qualified a grand total of 70.6% and produced 48 experts and 183 sharpshooters. Qualification courses are fired as scheduled regardless of weather conditions.

Too much credit can not be given to Master Sergeant Grider and the other enlisted members of the Weapons cadre for the difficulties they have overcome and the long hours of hard work they have put in cleaning and caring for all the weapons of the Training Center.

Basic Instruction

The basic instruction given to the trainee is the responsibility of the troop officers. It comprises all dismounted instruction from defense against chemical warfare to combat problems.

In addition to their administrative duties and the task of instructing in basic subjects for one period a day, officer and N.C.O. instructors from the training squadrons accompany their organizations to weapons training and horsemanship or motors. Here they assist generally the Department instructors and in order to prevent inactivity of trainees which results from lack of matèriel, the men who are awaiting their turns are given either functional or basic training until their time to drive or fire comes.

Trainees having previous military training, or who show the qualities of leadership, have been made acting squad leaders and have been issued special chevrons. These are black corporal's chevrons on a yellow disc. Additional hours are required of these acting corporals in the attendance of troop schools which normally precede each day's instruction. A vast majority of these men have had previous military training in either the R.O.T.C., the National Guard, or the C.M.T.C.

Recreation

The recreation program has been developed to a high degree in this camp. Intratroop and intrasquadron tournaments are now operating in volley-ball, boxing, soft-ball, and horseshoe pitching.

Hops are being held for the selectees in the various recreation halls. The civic organizations of the neighboring towns deserve a great deal of credit for the effort they are expending in getting girls here for these affairs. In addition to the dances, the recreation halls are being used twice weekly for "home talent" shows, and boxing and wrestling. We are very fortunate in

having a large number of professional entertainers among our selective service men. There are dancers, singers, musicians, and actors. These men take a great delight in being able to use their talents for the entertainment of their friends. The other selectees receive the shows with great enthusiasm. It is doubtful if any of the entertainers could ever have played to a more appreciative audience.

A typical program in one of the shows might consist of a piano solo by George Gregory who for several years has conducted his own band in New York, a tap dance routine by Harvy Dorsey a vaudeville actor, a short recital by Charles Mackie Swan, Philadelphia Civic Opera Company baritone, and a skit produced by a well known director.

Several well known professional boxers are with us in this contingent. Their talents are being utilized for the development of boxers among the other trainees. One of them, "Young Stuhley," particularly well known in the upper middle west has made it his private ambition to uncover a "white hope" while in the service. Mickey Paul is also known to all fight followers.

The recreation halls are each equipped with a piano, magazines, newspapers, ping-pong tables and dart boards.

The Service Club, constructed for the exclusive use of enlisted men, is of such magnificence that it puts to shame the Cavalry School Officers' Club building which was originally put up in 1917 or 1918 as a military camp recreational hall. The Service Club is well equipped with a cafeteria, a dance hall, a library and hostess's offices.

The Cavalry School Officers' Club has outfitted as a branch club one of the Officers' Mess buildings, complete with attractive furniture, special electrical fixtures, Venetian blinds, window drapes, pictures, bar, and barber shop. This has been provided for the convenience and pleasure of officers at the Center.

As many readers of this article will know, the distance between the center of Republican Flats and the Cavalry School Club is about four miles. This makes it very difficult for an officer, working as hard as the Replacement Training Center officers are forced to work in order to get the job done, to drop in at the club for a beer, a chat, or a bit of recreational exercise. The branch club here at the Flats has been a Godsend. It offers as recreational facilities volley ball, badminton, and ping pong. A soft ball diamond and two tennis courts are in the process of construction.

Band

A selectee band of 30 men was organized shortly after the arrival of the first group. Starting with a regular army director, Technical Sergeant Klineau of the 14th Cavalry, and three other musicians, qualified selectees were soon uncovered and put to work. They played for retreat after they had practiced together for exactly one hour. The results were unbelievable. They couldn't march, but the march music they produced left little to be desired. After a few weeks of intensive work they now can be favorably compared with any army band. This is due in part to the excellence of the training they have received, and in part to the fact that a large proportion of them were professional musicians before coming to the service. The band will be augmented by field music consisting of thirty-two bugles and ten drums, when the drums, now on purchase order, arrive. The Cavalry Replacement Training Center orchestra, which furnishes music for trainee hops and other functions, is hard to beat. It, too, is filled with men who played professionally in dance bands before coming to the service. The improvement in marching of the command was immediately noticeable with the organization of the band, especially so since the band has turned out to be such a fine one.

In general, after eight weeks of training selectees of this first contingent to arrive at the first Cavalry Replacement Training Center, we believe we may say that our work bids fair to be highly successful. Training in all departments is progressing satisfactorily.

With General Chamberlin in command of the organization, it seems that through his energy and guidance, we will achieve that perfection in training toward which we have striven. There is no doubt in our minds here at Riley, that we will be sending out men in June, who will, by their conduct in the Regiments, reflect a credit on the system that has trained them.

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It is very difficult for a nation to create an army when it has not already a body of officers and noncommissioned officers to serve as a nucleus, and a system of military organization.—NAPOLEON, Military Maxims.

Notes From the Chief of Cavalry

Change in Personnel, Office Chief of Cavalry

The following changes in personnel within the Office of the Chief of Cavalry have occurred recently:

Brigadier General Karl S. Bradford has been relieved of the duties of Executive Officer to assume command of the 2d Cavalry Brigade, Fort Bliss, Texas.

Colonel Howell M. Estes has assumed the duties of Executive Officer.

Lt. Colonel Charles S. Kilburn has been relieved of duty in the Operations Section in order to perform duty with the General Staff in the War Department.

Lt. Colonel Vennard Wilson, formerly Chief of the Weapons Department, the Cavalry School, has replaced Colonel Kilburn in the Operations and Training Section.

* * *

The following projects are at present undergoing study or test by the Cavalry Board:

Strip Films for R.O.T.C.
Changes in Field Manuals and other publications.
Antitank gun (in connection with the "bantam" car).
Gun elevator for Antiaircraft machine gun fire.
Submachine gun (new type).
Bullet-seal inner tubes.
Airplanes for liaison.
Boots, rubber, over-the-shoe.
Shelter tents.
Tool-set, horseshoers.
Pyramidal tents.

* * *

In the development of the 81-mm. mortar packs, cooperation was secured from the Quartermaster Corps, and Colonel A. E. Phillips, for whom the pack saddle was named, attended the final conference with Ordnance representatives at Rock Island Arsenal, together with Lt. Col. Forsyth, as a representative of the Chief of Cavalry. It is expected that the pack hangers will soon be in the hands of the using units.

* * *

Short-range Liaison Airplanes

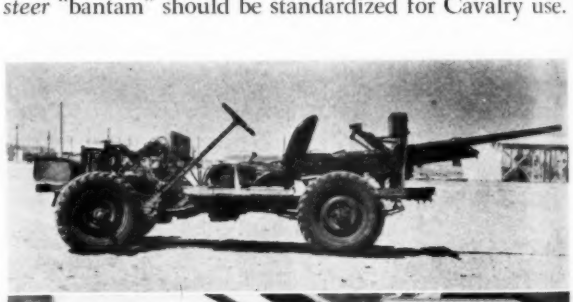
Field tests of 3 types of short-range liaison airplanes, the Ryan, Stinson, and Bellanca started on May 10th, 1941. Tests will cover: the ability of these planes to land and take off in restricted areas, function as command planes, ability to locate and identify ground troops, perform messenger duty, and required mechanical maintenance in the field.

When tests of these planes by the Cavalry Board are completed, the planes will depart for Fort Bliss for a similar test by the 1st Cavalry Division.

Experiment

The 1st Cavalry Division has successfully mounted a 37-mm. AT gun on a "bantam" chassis, thus producing a light, self-propelled mount. An interesting feature of this experiment is the fact that a section of a light truck rear end was cut and used as a pedestal mount for the gun. Accuracy, mobility, and rapidity of fire tests were highly satisfactory.

It is the opinion of the Chief of Cavalry, as a result of reports from testing agencies, that the *four-wheel steer* "bantam" should be standardized for Cavalry use.



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Please address all communications for The United States Cavalry Association and The Cavalry Journal to 1624 H Street, N.W., Washington, D. C.

Cavalry Demonstrations for GHQ

*Vicinity of Fort Myer, Virginia, April 3d**

IN order to familiarize personnel of GHQ with typical platoon combat exercises of cavalry units a series of demonstrations by platoons formed from elements of the 3d Cavalry was arranged. Suitable ground was found between Ft. Myer and Alexandria. Locations for various type exercises were designated, then troops were assigned to various exercises and worked them up in detail. These exercises were not tactical as the situations were known well in advance. They were in effect *battle drills* and of considerable training value in their preparation. Present for these demonstrations were Major General L. J. McNair, Chief of Staff, GHQ, and his staff; Major General John K. Herr, Chief of Cavalry; Brigadier General John N. Greeley, Commanding General, Washington Provisional Brigade; and Colonel W. W. Gordon, Commanding Officer, 3d Cavalry. Following are extracts from the report of these demonstrations with chronological summary showing times and distances:

First Phase: Platoon in defense and delay. Platoon organized in little depth should have automatic weapons to include Caliber .50 Machine Gun. Mechanization should be ambushed, advancing enemy columns should be delayed, forced to deploy and maneuver before the defensive platoon withdraws. Platoon reserve should be strong and mobile to cover withdrawal and for counterattack. Ammunition supply is vital. The platoon went into pack and moved one-half mile to the troop bivouac in seven minutes.

Second Phase: Troop in covered bivouac should be protected by all-around automatic ground and air defense.

Third Phase: Scout car action emphasizes the following points: Scout cars must have a covering force. They must advance by bounds and avoid ambush. For attack of a road block smoke or H.E. should be laid on the road block by attached mortars. Individual cars should make a wide maneuver and machine guns be maneuvered on the ground forming a base of fire. Platoon should be able to reduce a lightly defended road block promptly.

Fourth Phase: Light machine gun platoon. This platoon furnishes the automatic fire power of the rifle troop. It moves into and out of position at speed, guns going from pack and into action in well under a minute. Machine gun squads may be attached to rifle platoons or the platoon fought as a unit. Led animals are particularly vulnerable.

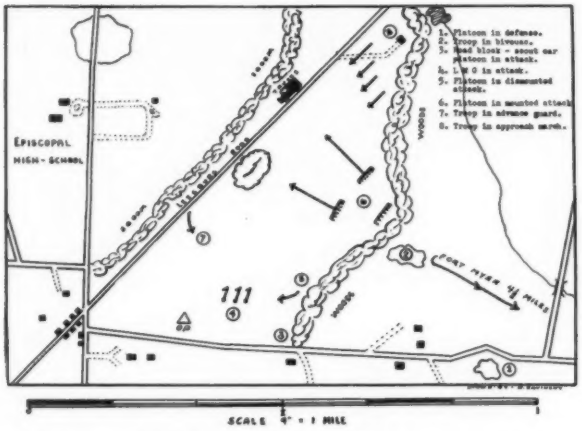
Fifth Phase: Dismounted attack. Platoon attacks on a broad front with little depth, covered by machine gun fire. Again led animals are the chief worry of the platoon commander.

Sixth Phase: Platoon in the mounted attack. The mission of attack is to close with the enemy and drive him from his position. This attack had two objectives: 1st—an infantry squad in position supported by automatic weapons; 2d—motor transportation for this force. Automatic fire-power firing at right angles to the direction of mounted attack forces the defender to keep under cover. The first squad moved directly to the first objective covering 450 yards in 35 seconds, dismounting and going into action. Second squad moved against the secondary objective. The platoon commander followed with the third squad and light machine gun squad to attack either or both of the objectives. While the platoon reorganizes, machine guns are put into position to repel enemy counted attack. Frederick the Great stated that speed in the attack saved casualties.

Seventh Phase: Advance guard formation where the main force moves on an axis of advance. Cal. .50 ma-

*Courtesy, Lieutenant Colonel C. H. Gerhardt, GSC, GHQ.

Left to right: **Major General J. K. Herr, Chief of Cavalry; Major General Lesley J. McNair, Chief of Staff GHQ; Colonel W. W. Gordon, Commanding Third Cavalry; Lieutenant Colonel C. H. Gerhardt, G.S.C., GHQ**


1. Platoon in defense.
2. Troop in bivouac.
3. Road block - scout car platoon in attack.
4. L W O in attack.
5. Platoon in dismounted attack.
6. Platoon in mounted attack
7. Troop in advance guard.
8. Troop in approach march.
EPISCOPAL HIGH - SCHOOL
111
FORT MYER 14 MILES
SCALE 1" = 1 MILE

chine gun should be well to the front. Commander should be up with the main portion of his advance guard. In case of mechanized attack, riflemen should allow this attack to go up against antitank weapons closing in behind tanks and scout cars.

Eighth Phase: Advance of the troops using a covering force. This covering force always a tactical unit, is advanced by bounds on the direct order of the commander. Bounds should be long. The main body follows under the command of the executive. Movement of the main body should be protected by machine guns in position. Cavalry in approach formations should be able to flow over any type terrain by the use of proper formations and under competent leadership.

Chronological Summary Showing Times and Distances

1st Phase

Introductory Remarks, 1st Stop	10:00	A.M.
Withdrawal of Delaying Platoon ordered by Platoon CO (1st Phase)	10:11	A.M.
Platoon reached troop bivouac, Distance ½ mile (1st Phase)	10:18	A.M.

2nd Phase

Observers reached troop bivouac (2nd Phase)	10:15	A.M.
Observers left troop bivouac (2nd Phase)	10:24	A.M.

3rd Phase

Observers arrived OP (3rd Phase)	10:31	A.M.
Message sent to Plat. Car to start exercise (3rd Phase)	10:34	A.M.
Leading Scout Car moved off road (3rd Phase)	10:38	A.M.
Dismounted MG fire from Scout Car MG opened fire (3rd Phase)	10:40	A.M.
Mortar attached to Scout Car Platoon opened fire (3rd Phase)	10:42	A.M.

4th Phase

Signal sent to Plat. CO to start exercise (4th Phase)	10:44½	A.M.
Platoon came into view (4th Phase)	10:45	A.M.
Time to open fire after "Action right" was given (4th Phase)	39 Seconds	
Time to move off in pack after "Out of Action" was given	1 Minute 50 Seconds	

5th Phase

Signal to open fire given at and fire opened (5th Phase) Dismounted attack	10:54	A.M.
Assembly ordered at (3 squads on a front of 250 yards)	10:59	A.M.

6th Phase

Signal to move out to attack (Mounted attack)	11:03	A.M.
Advance to objective required	35 seconds	
Reserve moved forward	11:05	A.M.
LMG's went into action on objective (Distance 450 yards)	11:06½	A.M.

7th Phase

Signal to start march	11:11	A.M.
Point appeared	11:13	A.M.
Point started across open demonstration area	11:18	A.M.
Main body across open demonstration area Distance 1,200 yards.	11:21	A.M.

8th Phase

Covering Force started across open demonstration area	11:32	A.M.
Covering Force reached observers' position	11:35	A.M.
Troop CO started across same area	11:35	A.M.
Troop CO reached observers' position	11:37	A.M.
Main body started across same area	11:37	A.M.
Head of main body reached observers' position Distance 1,200 yards.	11:42	A.M.

Distance covered in the combat phases totaled 5 miles in 1 hour and 42 minutes elapsed time. Total distance including administrative move to and from Fort Myer 14 miles.

To conclude the critique General McNair commented on the exercises as follows:

> "I want to express the appreciation of GHQ for what you have done for us today. Fort Myer, in its typical fashion, has put on another splendid show. Instead of the usual horsemanship display we have been shown a real battlefield demonstration and it certainly was what we wanted to see. I am delighted to see so many young officers do so well and I suspect that the older NCO's have had a very strong hand in this performance. Congratulations and thanks deeply."

His comments with reference to the report submitted on this exercise were:

> "Your report re Myer Demonstrations is very interesting. Visibly and by actual times, the speed and smoothness was impressive especially for comparatively new troops."

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General Hawkins' Notes

Antitank Corps

IT is time, and after time, to fix a system of tactics on which we can depend to meet the new conditions we may have to face. These tactics must depend on the kind of armament we may get in a comparatively short time. It is necessary to observe carefully the tactics of the warring nations but not to copy them slavishly. Their tactics are based upon their armament. The tactics of Germany are based upon superiority over other nations in air force, in tanks, and in numerical strength of her other arms. For us, in the absence of this superiority, for a long time to come, it would be foolish to try to imitate the Germans. We must have a tactics of our own. They must be based on the armament we can get quickly. Airplanes and tanks in great numbers cannot be produced quickly. But, from a comparative standpoint, guns can be. Once they are produced in great numbers they can be stored away when not needed. Although they will need repairs from time to time, they do not wear out or become obsolete as quickly as airplanes and tanks. I refer especially to antitank guns.

It is not likely that in a short time, the United States will catch up with European nations in the matter of tanks and airplanes. Nor is it likely that if we were given time to catch up we would continue to maintain in peace time such great numbers of these machines. It is possible to produce enough antitank guns, however, of the proper caliber to permit us to carry out offensive operations with the rest of our forces. We must have air force, armored force, infantry, artillery, cavalry, engineers, etc. If we cannot stop the enemy armored forces we cannot use these various kinds of troops. They are all needed, but they will do us no good if the enemy armored forces are not stopped. Our own armored forces will certainly be inadequate numerically for a very long time—perhaps always.

Let us examine the present war between what we call the Axis Powers and the Allies.

Once again, Germany has given an example of a large, well equipped, well trained army in an offensive against smaller armies less well equipped and, therefore, forced to take a defensive attitude. Germany is believed to have some thirty thousand tanks.

When, in these days of movement and open warfare, an army is forced to go on the defensive, it must be an active defense and not a passive defense. In order to conduct an active defense the army must repulse the assaults of the enemy and then counterattack.

The Germans use three, four, or five heavy columns distributed over a wide front according to the nature of their terrain. To repulse them, each of these columns must be repulsed, because if one of them succeeds in breaking through it moves swiftly with armored mechanized troops to gain the flanks and rear of those elements of the defensive army which may be holding. In that case, only powerful reserves thrown in time against the enemy may check the break-through.

On account of the great numerical superiority of the Germans over the Allies in every theater of war so far, the Allies have had in each case to assume the defensive rôle, hoping to make an active defense and finally to take the initiative and convert the campaign into an offensive of their own.

To have any hope of success, the Allies must have enough troops of various kinds to meet the several German attacking columns and repulse them despite their superiority in numbers and attack equipment. In addition, the Allies must be strong enough to hold out a powerful general reserve, as well as the local reserves of those forces opposing themselves to each of the German columns. Without this general reserve, any breakthrough, by any one of the German columns, wrecks the whole defensive line as just explained.

Each of these separated German columns has several Panzer divisions as well as several Army Corps of three or four infantry divisions each; therefore, each of the Allied columns whose job it is to stop a German column must have the means to repulse and then to counterattack. This repulse cannot be effected by infantry and field artillery alone. It is known that the Germans will use dive bombers and mechanized divisions whenever the resistance is stubborn. Even in narrow valleys or mountain passes, the German tanks cannot be stopped by the fire of infantry rifles and machine guns, nor by field artillery guns placed in rear in the usual way. Neither could an armored force in each of these Allied columns repulse the German Panzer divisions, because, in each case, the Germans have superior numbers of these armored troops. To send inferior numbers of Allied armored forces is merely to destroy the Allied tanks to obtain a short delay.

What the Allies need is to have mobile brigades of antitank guns trained to deploy on the front line and in successive lines. These troops should be highly trained and imbued with the idea of sticking to their positions to the end. The closer an enemy comes to these guns the more deadly the guns become. They can shoot more accurately than the enemy's guns which are in moving

tanks, They can, if time permits, be dug into emplacements and camouflaged. They can be supported by the field artillery in rear. They can be supported by aviation so that their enemy's dive bombers may not have unopposed opportunities. Thus, these guns being properly deployed, the dive bombers of their opponents will not be able to destroy them. Dive bombers in France did not destroy any deployed troops who had the determination to stand and fight. These mobile antitank units should be able to stop the enemy; moreover, the guns must not only be mobile and powerful enough, but also they must be protected from machine gun fire by shields or armor of some sort. Otherwise, their crews will be too much exposed to the machine gun fire from enemy tanks and hostile supporting troops. Then, and not until then, our armored forces can execute a counterattack against the crippled tanks of the enemy. This counterattack can be supported by infantry divisions and all the rest of the army.

Of course, the enemy will bring up his infantry to meet the counterattack, but the tendency of armored forces to push ahead so far in front of marching infantry might enable the defenders to counterattack very successfully before hostile support could arrive.

The Germans got the jump on the Allies before the war started in the matter of airplanes and tanks. No one knows if or when the Allies may catch up. Certainly not in the immediate future. The tactics of the Allies should be adapted to the conditions.

It is passing strange that after the Polish Campaign the Allies did not see clearly that the German tanks could not be stopped by ordinary means or by inferior numbers of mechanized forces. It is still stranger that after the conquest of France the importance of great numbers of mobile antitank guns was not appreciated. The attempt was made to catch up to the German mechanization by making British mechanization. But that has not been accomplished, nor is it likely to be.

If the Serbian Army had been equipped with sufficient numbers of antitank guns they could have made good use of their mountainous country. The Greeks needed antitank guns too. It seems that they destroyed a number of German tanks by fire from their pill boxes in defensive positions, but the Germans managed to get around such positions. The general reserve, too, in the Greek army, as in every army, needed to have many strong units of antitank guns. The British, also, need them in large numbers.

The repulse must come before the counterattack. Antitank units can effect the repulse of the hostile tanks. Armored forces, and other forces, can then make the counterattack.

To fight land forces requires proper means and skill in the use of those means. Means without skill is of no avail. Skill without means is pathetic. The Germans have had both. The Allies have been short of both. Unity of command seems to be impossible in allied armies. This lack of one central command was nearly fatal to the Allies in France from 1914 to 1918. Only in 1918 was it established.

But now, in the situation of the present date, the Allies should understand that special means must be provided and skillfully used to hold off disaster until the Germans can be met on equal terms. It is all very well to hasten the production of tanks and airplanes, but in the meantime antitank guns must be produced and organized to prevent the German Panzer divisions from running wild without effective opposition.

There is no doubt about it, we must organize and train our army in the proper tactics for an active defense as well as for an all-out offensive. An antitank corps must be developed and trained in tactical exercises. We must smash the hostile armored forces and then take the offensive with everything we have. At the beginning, we shall always be inferior in strength to any aggressor nation that may attack us. We must be prepared, therefore, for an active defense first and a general offensive afterwards. Even if we were able to assume a general offensive at the start of our military operations, the enemy would attempt to smash us with armored divisions. We must not only have means of attack but also means of defense in certain areas. The machine gun attained its prestige as a weapon because of its power in defense. This made it possible to hold in one spot while we attack in another, and to repulse counterattacks made by the enemy to halt our attack. In the same way, we must develop antitank units of high *esprit de corps* to do the same kind of work against enemy armored forces as the machine gun has done against other kinds of troops.

The conditions that are reported at this date (May 7th) in Greece, Yugoslavia and North Africa, support these views perfectly. With almost two years to produce the necessary equipment the allied nations at war against the Axis have failed to understand them and are suffering in consequence.

The recent accounts of massed German infantry with almost solid ranks hurling themselves against Greek and British troops in position, without attempting to use cover and thus sacrificing thousands of men recklessly, show that the Germans are not perfect in their tactical conceptions and may suffer some serious repercussions in the future. The idea of sending solid masses of men to crush the enemy by sheer weight and numbers has been tried before. It is sometimes successful locally, but with such frightful losses that it cannot be kept up for long even by the most ruthless commanders with great hordes of men at their disposal.

Our factories have all sorts of orders for military equipment. Great importance should be given to antitank guns and ammunition for them. Our factories should be turning them out by the thousands. We boast of inventive skill and resource in this country. We should adopt, without delay, the type of antitank gun we want, a mobile mount, a shield against caliber .30 machine gun bullets, and turn them out with

greater haste than any other one weapon the army needs. The caliber .50 machine gun, which has really a bore of only about 12-mm., is inadequate against the medium and heavy tanks now being used.

After we get the guns the units must be organized and trained. The officers must learn how to maneuver such large units of guns and keep them supplied with ammunition.

Our government must be made to understand that we want these antitank units only to smash enemy tanks. They would be ineffective against enemy infantry and other arms, so, we must have our own infantry and other arms. First of all, however, we must smash the enemy tanks. Then we can use the other arms.

Some men say that the only answer to an enemy tank is a bigger or better tank. That means that we must have more tanks than the enemy has. This is an advantage enjoyed so far in this war only by the Germans. If we get into war we cannot count on having more tanks on the spot than our enemy has. We must have more insurance than that. The British tank units have fought splendidly and smashed a lot of German tanks, but it was a desperate measure and served only to delay the Germans. The delay was useful, but the British were not strong enough, either in tanks or other arms, to use it to turn an offensive against the Germans or to resist effectively the subsequent attacks. The Germans had many more tanks; the British had very few left. Large units of good antitank guns in the British and Greek armies would have saved the British much sacrifice in tanks and preserved them for counterattacks.

Of course, this is not to say that the British and Greeks would have won. The Germans had huge forces backing up the Panzer divisions, and they had great superiority in the air. The campaign might have been prolonged, however—especially had the Serbs been armed with antitank guns, also—until other influences had become important factors. Defensive warfare, particularly the active defense, sometimes brings wonderful results in the end.

Although antiaircraft guns have justified their production and are indispensable, they alone have by no means given the measure of protection that is desired against attacks from the air. They assist the pursuit airships which probably have downed more hostile airplanes than the guns have. Even the combination of these guns and pursuit ships cannot give adequate protection to cities from bombing, especially at night. In daytime they do fairly well. Antitank guns promise to do better against hostile tanks, but they are needed in great numbers. This must be emphasized.

Aided by great superiority in the air, the Panzer divisions, practically alone, brought about the conquest of France; yet their successes would have proved fruitless without the huge forces of the other and older arms which followed them. This statement is repeated because it must not be forgotten.

We must not only build tanks as fast as we can. We must have a mobile force to stop tanks and permit the full use of our other arms.

No matter what our progress may be in arming ourselves with airplanes and tanks, a powerful antitank corps would give us a great advantage over other armies. This could be peculiar to America. Let us beat the enemy in the American way.

* * *

In the May, 1941, issues of *The Infantry* and *Field Artillery Journals* appear articles on antitank defense by Major A. C. Wedemeyer, Infantry, U. S. Army. These are excellent articles, worthy of study. Major Wedemeyer gives some detailed figures about antitank guns in use in various armies in the present war. He suggests the following distribution of antitank means and weapons.

In each infantry regiment:
16 calibre .50 machine guns.
12 37-mm. AT guns (a company).
1000 light AT mines.
In each infantry division:
36 37-mm. AT guns (a battalion).
1000 heavy AT mines (in engineer battalions).
In each army corps:
36 37-mm. AT guns.
36 4″ dual purpose guns for AA and AT defense (a regiment).
In GHQ:
3600 37-mm. AT-AA guns (100 battalions).
3600 4″ AA-AT guns (100 battalions).
5000 medium tanks (tank chasers) with a 75-mm. gun in each.
Pursuit aviation and light bombing units from the GHQ air force.

Thus, Major Wedemeyer agrees with me that we must have literally thousands of antitank weapons. He also agrees that our main armored force must not be used in antitank defense, but in counterattack or offensive missions of its own, of course, backed up by other forces. In other words, our antitank defense must be sufficient unto itself and not have to call upon our armored force to repulse the enemy.

To learn to use those means of antitank defense, we must have tactical exercises of divisions and corps arranged for that very purpose. It would not be right to expect an infantry division, with its some 72 antitank 37-mm. guns and some 50 calibre .50 guns, to stand up to a very heavy armored force attack without great reinforcements of antitank weapons from corps and army. This reinforcement must be practical in tactical exercises. While the antitank units of the division are being put into action the other units of the division should be withdrawn a certain distance to permit antitank units a freedom of action, to permit corps antitank units to come up and deploy, if necessary, and to avoid having rifle and machine gun battalions run over and

demoralized by a few of the enemy tanks that might have broken through and might be running wild before they can be dealt with by the antitank units. How this is to be done, including the disposition of the divisional field artillery, etc., can be determined only by actual practice in division and corps exercises. A few, at least, of the rifle and machine gun companies will have to be left in close support of the antitank units to deal with enemy detachments of infantry that accompany the enemy tank units and to prevent the removal of obstacles and mines that may have been laid to delay the enemy attack.

Such exercises will tell the commanders and their staffs more than can possibly be written from a purely theoretical standpoint. They are, therefore, vital to the training of our army in addition to other exercises of a more offensive nature. No division, corps, or army commander should be satisfied with his own knowledge or competence until he has become experienced in such exercises, and those exercises should give opportunities to develop the initiative and resource of the commanders and leaders of small units. The basic training of the individual soldier is only the elementary beginning in the training of an army.

When we consider the equipment and training necessary for just this one item in the armament and training of only one field army consisting of several army corps, the immensity of our task in production, organization and training for the whole army is a little staggering. This one item of antitank defense, however, is absolutely necessary if we are to take the field against modern armies.

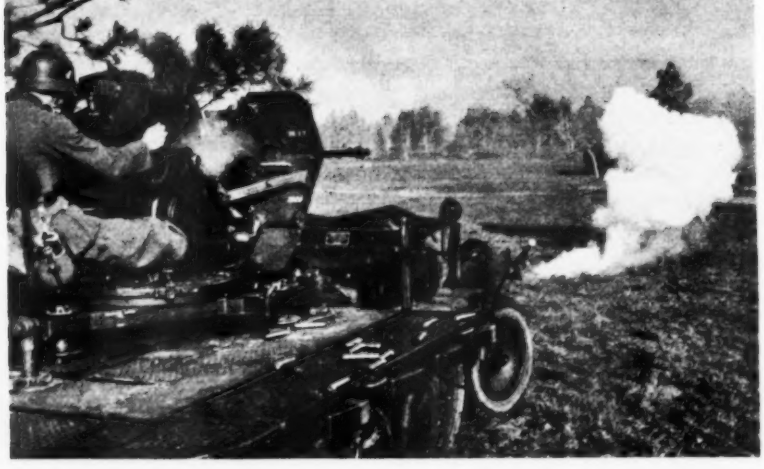
Major Wedemeyer's figures are after all only suggestions. There are many questions he does not touch. For example, he does not specify whether the GHQ he speaks of is the great general headquarters or the GHQ of a single field army; nor does he discuss the organization of the many battalions he wants. There is no doubt in my mind that we must have an antitank corps of large proportions. The antitank units assigned to regiments may be organically part of the branch of the service of the regiment. They are small. But the antitank battalions behind the infantry or cavalry regiments should belong to the antitank corps. Perhaps, in the cavalry, the antitank squadrons in the brigade should be composed of cavalrymen for reasons that do not apply so much to the antitank battalions in an infantry division.

Whatever the caliber and kind of gun to be made in such great numbers, and whatever the organization adopted, we must not haggle. It must be decided now. There is no time to lose.

TWO NEW GERMAN WEAPONS (From "Signal," February, 1941)*

FOUR-BARREL LIGHT AA GUN

This 20-mm. automatic weapon is not a part of the regular antiaircraft organization, which, in the German Army, pertains to the Air Force. It is assigned to infantry, artillery, or such other ground forces as may have need of protection against low-flying aircraft.



SELF-PROPELLED AA-AT GUN

Smaller than the multiple-barreled mount, this weapon is used against either planes or tanks. It employs an automatic 20-mm. cannon mounted on a tracklaying vehicle having a very low silhouette. The Germans claim that units employing these two weapons have brought down 250 enemy planes since the beginning of the war.

*Plates courtesy *Field Artillery Journal*.

Cavalry Bridge Requirements and the Cable Bridge

*By Lieutenant Colonel W. B. Bradford, Cavalry**

MODERN Cavalry is part horse and part mechanized and motorized. The tasks assigned it will frequently require its operation under conditions of terrain such that the horse elements with their machine guns, special weapons, and ammunition in pack will advance and operate beyond the immediate support of its numerous mechanized and motorized fighting, supply, and maintenance elements. *At the earliest possible moment,* a few antitank, reconnaissance, command, and ammunition vehicles must be gotten forward to give essential initial support. *Eventually* all mechanized and motorized transport must be advanced.

Tables of Organization for the Cavalry Division show 7,707 horses and mules, and 1,486 mechanized and motorized vehicles. The animals listed are classified as follows:

Horses, draft, 504 (500 of these are in the Field Artillery).

Horses, pack, 767 (To carry the machine guns, antitank guns, radio equipment, ammunition, and other supplies immediately required).

Horses, riding, 6,141 (To mount the riflemen of the Division).

Mules, pack and riding, 294 (In the Quartermaster Squadron for transporting ammunition, food or other supplies as needed).

In the 1,486 motor vehicles listed are included 148 scout cars, 13 light tanks, and 373 motorcycles and tricycles. These vehicles are used for reconnaissance, antitank defense, messenger duty, and combat. The remaining motor vehicles of the Division are essentially supply, maintenance, and command vehicles.

In the Cavalry Regiment, Horse, there are 1,520 horses, riding and pack; 30 motorcycles and tricycles, and 37 scout cars and other vehicles employed essentially for reconnaissance, combat, maintenance, and supply. With the exception of a few weapons carried on motor units, all armament of the regiment, including rifles, machine guns, antitank guns, and mortars, is carried on horseback. The horse elements of the regiment are thus self-sufficient, and for an appreciable length of time can operate independently of their motors. For this regiment, terrain consequently presents few obstacles, as man and horse can cross rough country, swim rivers, negotiate arroyos and mountains, and pass through difficult areas inaccessible to armored troops and motor transport except with great difficulty.

The Cavalry Regiment, Horse and Mechanized, having one squadron of horse and one mechanized, has characteristics, potentialities, and problems closely paralleling those of the horse elements and the mechanized and motorized elements of the Cavalry Division.

According to present Tables of Organization, the Engineer Squadron of the Cavalry Division has ten assault boats but no bridging material. Such material has purposely been omitted from basic tables of allowances as its great bulk and the road space involved are such as to detract from mobility. Where bridging material is required, Cavalry has been expected to depend upon Corps or Army.

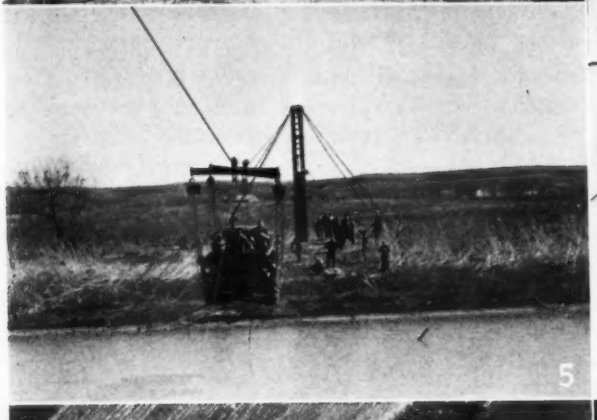
The missions assigned Cavalry often require it to operate at a distance from the Corps and Armies with which associated. The existence today of numerous armored forces will probably result in greater future emphasis on its employment in country not suited to the movements of armored vehicles, and likewise unsuited to the movements of cumbersome bridge trains.

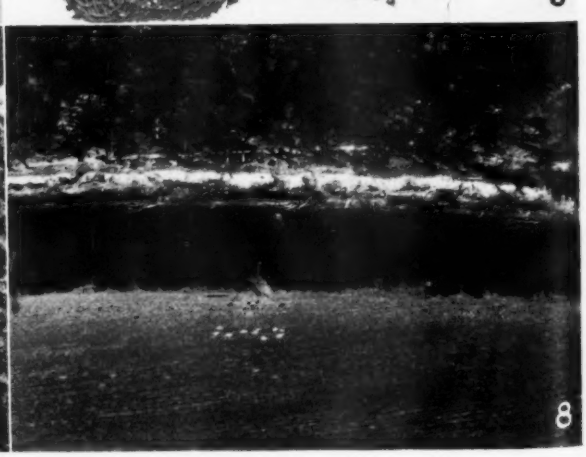
Under such conditions, Cavalry may be expected to advance its horse troops across obstacles that impede the progress of its mechanized and motorized elements. These horse troops will establish bridgeheads and with their own means will be able to maintain themselves for a short time. At the earliest possible moment, however, they must be given some *initial support* by a few of their mechanized reconnaissance and heavier antitank means. The ammunition supplies in combat vehicles must be brought up. *At this phase of operations,* requirements will be limited to a very few essential vehicles, but this initial group, though small, will be desperately needed. Furthermore, as operations will often be on a rather broad front, advance facilities for moving up essential vehicles must be provided for *each of the several brigade or regimental combat teams involved.*

Eventually all of the equipment of the Division must be brought up.

If suitable ponton bridges can always be provided and placed in position to meet both the *initial* and *eventual* needs of Cavalry, so much the better. But of course this is impossible. These trains will seldom be available in the preliminary phases of operations and conditions of terrain often will not permit their use at all. It is evident, therefore, that some other type of equipment must be available; equipment that can be

*Chief, Department of Tactics, The Cavalry School, Fort Riley, Kansas.





1—Arrival of complete cable equipment for 700 foot span. 2—Tower being towed across river preliminary to erection of cable way. 3—Complete tower erected, showing anchor and stabilizer system. 4—Command car "taking off" over edge of cliff. Approaches are immaterial. 5—Truck and crew in middle of span. The greater the sag the greater the permissible load. 6—Scout car in transit. All personnel may ride in vehicles. 7—Vertical aerial photo of cableway, showing relative invisibility. No attempt has been made at camouflage. 8—Oblique aerial photo of cableway. Concealment is relatively easy. No attempt has been made at camouflage.

broken up into small units for use on a broad front if necessary; equipment that will suffice for emergency use until more permanent bridges can be provided.

This equipment must be light, mobile, easily handled, require very little road space or transport, and preferably no personnel in addition to that now contained in the Engineer Squadron. It should be such that defiles may be crossed whether the bottoms are filled with water or are dry. It should be such that conditions of banks and approaches have little effect on the placing of the structure in question. It should be easily camouflaged or concealed as Cavalry antiaircraft equipment is very limited. Its capacity should be such as to transport the essential vehicles of Cavalry regiments together with a few supporting antitank guns of heavier type during the course of a night. It should be capable of division into units so that separate bridges can be erected behind each combat team.

Ferries meet some of these requirements, but they are dependent upon suitable approaches, good depth of water, and cannot be used where water does not exist. They lack mobility, are difficult to hide, and can be easily destroyed.

Cable Bridge

There has recently been developed at Fort Riley a new type of bridge that appears to have overcome all the objections and to retain all the desirable features mentioned above. This is the Cable Bridge designed and constructed by *Lieutenant Colonel Roy Lord,* formerly of the 9th Engineers.* As its name implies, this bridge is literally a steel cable, supported by two portable towers. The entire equipment, sufficient for a 700-foot span, and capable of carrying loads equivalent to that of the light tank, weighs 14 tons. At present it is carried on one truck and trailer. For field use, two trucks will probably be used. The bridge is easily erected in three hours by a crew of 52 men drawn when needed from the Engineer Squadron of the Cavalry Division. Only 12 of these men need be skilled. When the bridge is not in use, the crew can be reduced to the two drivers that are required to handle the trucks.

The bridge operates equally well over water, dry river beds, or from one side of a ravine to the other. Preparation of approaches is not required. Banks may be precipitous or gently sloping, heavily wooded or open, high on one side and low on the other, or vice versa, or at equal elevations. The construction and operation of the bridge is not affected. The only requirement is that the vehicles transporting this material, and those to be put across the obstacle, can approach to within 100 yards of the banks, more or less, and that there is a possible get-away on the other side.

*Now on duty with the Bureau of Public Relations, War Department, Washington, D. C.

Construction

Briefly, the construction of the bridge is as follows: The two equipment trucks and the work crews detailed from the Engineer Squadron drive up to the desired crossing point. This should be preferably a wooded area to give concealment. Equipment is unloaded. Tower crews, lead lines, and a system of pulleys are crossed to the far side by assault boat, or swimming, if a river, or by climbing, if a dry ravine. The pulleys are anchored and the lead line is brought back to the near side of the defile. By use of the anchored pulleys, and power furnished by Engineer trucks on the near side, one of the towers is floated or dragged across the obstacle. Towers are then raised and anchored. The steel cable is then passed over the towers. An especially constructed sling, operating on heavy steel runners, is attached to the cable. Again by use of motor power on the near bank, the cable is tightened and raised or lowered as desired.

When ready, the cable and slings are lowered, vehicles drive onto the sling, the cable is tightened. Then by use of the lead line and pulley on the far bank, and motor power on the near side, the load is moved over the river or ravine. On reaching the far bank, the cable is lowered until the sling touches the ground. The vehicle rolls off under its own power. The sling is drawn back again to the near bank, and the operation repeated. The complete operation requires slightly under five minutes, giving a traffic density of 10 to 15 vehicles per hour.

With towers properly concealed, the only exposed part of this bridge is the steel cable—1¼″ in diameter. It is consequently almost invisible from the air, and cannot be seen from the ground unless the observer is quite close. Since there is great liberty in choosing the location of this bridge, it should usually be possible to place it so that its approaches are well concealed by woods. Its discovery by the enemy should consequently be most difficult. Even when located, the bridge is relatively safe from air bombardment and artillery fire, as a direct hit must be registered on one of the towers before much damage is done.

This bridge seems to offer so many possibilities, not only for the Cavalry, but for all arms, that it should certainly be given a thorough field test during the maneuvers to be held this summer and fall. Should tests prove satisfactory, a limited number of the cableways, perhaps one per combat team, should be included in the equipment of the Engineer Squadron of each Cavalry Division or similar unit.

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Editorial Comment

Faith and Work

"All the scholastic scaffolding falls, as a ruined edifice, before one single word—*faith.*"—Napoleon.

☆ ☆ ☆

" 'Tis not the dying for a *faith* that's so hard—'tis the living up to it that is difficult."—Thackeray.

☆ ☆ ☆

We are not attempting to moralize when we invite attention to this subject. To survive the times, we manifestly must have unstinted national faith and confidence; faith and confidence in ourselves and in each other; faith in the ability of our military establishment to defend this nation; and faith in that our nationals, in turn, unselfishly and with foresight, will allow nothing to impede the progress of our national defense program.

The propagation of false conception is an insidious weapon. We recently have witnessed the gradual defeat-in-detail of many European nations, largely attributed to a lack of faith and unity, and to the boring of "termites" from within the national core. Skepticism, suspicion and doubt probably have contributed more often and effectively to the defeat of armies than to any combination of enemy weapons and strategic and tactical military evolutions. The tendency of some individuals to depreciate the efforts and abilities of others in superior position, that they themselves might appear superior, is a vicious practice. Some, merely, are given to just plain "loose talk" without intelligent consideration. Others are unquestionably sincere, but obviously are misinformed as to the true facts.

America has the resources, the leadership and the organization necessary to meet any emergency. All Americans, by now, should be aware, however, that every effort, knowingly or unwittingly, which tends to destroy our military confidence and faith in ourselves, our leaders, or our future will proportionately result in a definite contribution to our enemy's *fifth column.*

☆ ☆ ☆

Common sense dictates the present need for *concerted work.* The greatest asset of any nation is the animated patriotic spirit of its people, and the greatest danger that can menace any nation, or military organization, is the break-down of that spirit—*the will to win and the courage to work* for our national defense. It was Henry Giles who said, "Man must work. That is certain as the sun. But he may work grudgingly, or he may work gratefully; he may work as a man, or he may work as a machine. There is no work so rude, that he may not exalt it; no work so impassive, that he may not breathe a soul into it; no work so dull that he may not enliven it."

The real danger to "non-Axis" countries today lies in the almost fanatical faith of Germans in themselves, in the tremendous power of the German army, and in the amazing capacity of the German people to sacrifice and work hard in coördination with an intense faith.

We, all of us respectively, have a task to accomplish in this emergency. To all cavalrymen, naturally, the combat efficiency of our cavalry is of paramount concern, not forgetting, however, that we are a component of a greater combat team.

Our FAITH, confidence, loyalty, and WORK, are essential in generating the necessary effective national strength.

★★★

Perspective

Total War presents such a colossal, gigantic, stupendous motion picture that it is extremely difficult for us, without actually witnessing it, to visualize its magnitude and tempo. Recent developments in Europe clearly indicate that the non-Axis nations have lacked *Total War Perspective*. If we are to profit by their experience we obviously must quadruple and preferably quintuple our present national effort.

It is past time that we as a nation stop wishful thinking and squarely face the facts. In every purely military situation in the present war the deciding factor has been air superiority combined with the tremendous drive actuated by mobile fire power in flanking operations. The other contributing elements are initiative, imagination, surprise, morale, leadership, endurance, RUTHLESSNESS, superior training, employment of all possible means in coöperation, superior numbers and superior weapons.

To develop such a military machine requires time, exhaustive effort and total support. For effective defense against total war, *Total War Perspective* is an absolute requisite.

* * *

Flanks

If all of the military historical incidents since the beginning of recorded history were summarized, the greatest resultant tactical lesson (assuming air superiority) for ground troops probably could be stated as simply as, *"Guard well our flanks and front, and seek enemy flank weakness."* . . . In other words, *Typical Cavalry Tactics.*

* * *

Non-combatant

Recently, in a newspaper published near Washington, an editorial bore the caption, "We cannot depend on our General Staff." Knowing the editor of that paper to be a loyal and patriotic citizen and that he must have some reason for such an unjust accusation, the Editor of The CAVALRY JOURNAL made inquiry. It seems that the editor in question had asked a friend—an enlisted man stationed at Fort Myer—how often during his eight months' service had he fired a rifle. The reply was, "Not at all." From this answer the editor wrongly deduced that the army is not giving consideration to rifle marksmanship. The explanation in this case is that the enlisted man is assigned to the *Medical Department*, and under the terms of the Geneva Convention, the Medical Department is not equipped with the rifle, and only under special circumstances as provided by the Rules of Land Warfare, are enlisted men of the Medical Department armed.

Our socalled non-combatant groups, nevertheless, render valuable service to our army and our country.

The Obligation

Excerpts from an advertisement published by an American automotive corporation, under the timely caption FORWARD MARCH!

Recent events have made it shockingly clear our country faces a peril that threatens to engulf all that we have and hold dear.

That peril is known. We need not define it. But we do need to define the obligation which it places upon the shoulders of every one of us.

That obligation is first of all to get done as fast as can be the vast defense task upon which the nation is engaged, and to stick at it regardless until we do get it done.

* * *

We all hope our country shall never itself need to wield the weapons we are building and will build in increasing volume.

But the best assurance against this is for us to go forward as Americans who stand inseparably together in order to get this defense job done.

For the defense of our country, an idle or even an inefficient factory is today no better than a bombed one.

* * *

Bantam and Scout Car

Now that we have the Bantam, what about substituting the Bantam for our scout car? Consider in this regard the installation of radio, antiair and antitank guns.

What do YOU think of it?

* * *

Antitank Guns

One of our readers recently recommended that all horse cavalry light machine gun platoons be replaced by *antitank* platoons. At first glance this idea might seem to have considerable merit. Such a plan however would tend to convert cavalry specifically into an antimechanized element, with resultant decrease in cross-country maneuverability; which is not the primary mission of cavalry.

At present, it is not intended that our horse cavalry regiment will operate as a separate unit—but as a part of the cavalry division. Our cavalry division similarly will be part of a cavalry corps. Brigade, division, and corps antimechanized units therefore will be attached to regiments; and army units being organized specifically to combat mechanization will work in close cooperation with cavalry. Such army units include the larger calibered, self-propelled weapons.

Cavalry today, from a corps point of view, is comparatively strong in antimechanized weapons for its own defense. The rôle of breaking up *large* enemy tank formations is the task of GHQ troops especially organized and armed for that specific operation.

Personnel, National Guard Cavalry

Educational qualifications of National Guard enlisted personnel are high throughout the Army. Statistics of the 107th Cavalry now stationed at Camp Forrest, Tennessee, are as follows:

107TH CAVALRY (H-MECZ)

Number of enlisted men who are college graduates and who have two or more years in college:

Troop	*2 Years*	*Graduates*
Hq. Troop	42	35
Service	72	11
Band	7	2
Med. Det.	15	2
1st Sq. Hq.	4	–
Troop A	24	8
Troop B	31	8
Troop C	18	5
2nd Sq. Hq.	3	2
Troop D	58	32
Troop E	40	14
Troop F	18	1
	332	120

Sleeping Sickness of Horses, 1940

An improved method of immunizing horses against encephalomyelitis, also known as sleeping sickness of horses, by intradermic vaccination is described in a report recently issued by Dr. John R. Mohler, Chief of the Department of Agriculture, Bureau of Animal Industry. Former methods gave rise to some undesirable reactions and in some cases, it was reported, caused deaths, but injection of the vaccine into the skin has yet to reveal unfavorable results.

The report estimates that about 1,000,000 animals received vaccination last year. Favorable results of the Bureau's studies on intradermic vaccination led to the wide adoption of this improved method during the latter part of 1940.

A copy of this report may be obtained from the Bureau of Animal Industry, Department of Agriculture, Washington, D. C.

Army Horses and Mules to be Inoculated Against Tetanus

For protection against tetanus the Army plans to immunize all horses and mules in the military service through the administration of tetanus toxoid.

In contrast to the transient immunity produced by tetanus anti-toxin, the protection resulting from toxoid injections ordinarily lasts several years.

During the past two years tetanus toxoid has been used extensively for the immunization of both soldiers and animals in the European armies.

11th Cavalry, Campo, California

Cantonment type housing facilities which will cost an estimated $1,050,000 have been authorized at Campo, California, for the entire regiment of the 11th Cavalry. The name of the camp has been designated as Camp Lockett. The construction work authorized includes:

28 barracks.
9 company storehouses.
1 regimental administration bldg.
1 officers mess.
1 post exchange.
1 warehouse.
1 fire station.
1 gas station.
1 cold storage building.
1 nurses quarters.
1 medical detachment mess.
2 animal warehouses.
9 hay sheds.
28 open stables.
9 mess halls.
9 day rooms.
3 officers quarters.
1 regimental recreation building.
1 guard house.
2 magazines.
1 flagpole.
1 utility shop.
1 hospital administration building.
1 medical detachment barracks.
2 hospital wards.
9 blacksmith sheds.
1 motor repair shop.
Heating System, Clearing and Grading, Roads, and Utilities.

Activation

The War Department has announced that the activation of more than 300 new Army units, large and small, will be made possible beginning about June 30, 1941, when the *Replacement Training Centers* of the Army "graduate" their first class of approximately 148,000 trainees called under the Selective Service Act.

CAVALRY UNITS TO BE ACTIVATED

Hq. & Hq. Troop, 3d Cav. Brig., 2nd Cav. Div.
Hq. & Hq. Troop, 4th Cav. Brig., 2d Cav. Div.
Weapons Troop, 3d Cav. Brig., 1st Cav. Div.
Weapons Troop, 4th Cav. Brig., 2d Cav. Div.
Hq. & Hq. Det., 2d Cav. Div.
Hq. Troop, 2d Cav. Div.
Antitank Troop, 2d Cav. Div.
Antitank Troop, 1st Cav. Div.

Weight Limit Removed for Cavalry

An Army Regulation, established in 1923, providing that "no applicant for original enlistment will be accepted for Cavalry Service whose weight is in excess of 170 pounds," has been changed, and no weight limit now is prescribed, except that provided by regulations for all enlistments. A standard weight for height table now governs all enlistments.

Army Strength (Estimated) May 15, 1941

The strength of the Army of the United States, May 15, 1941, was estimated at 1,320,500 officers and enlisted men. The breakdown follows:

OFFICERS

Regular Army	14,000
National Guard	20,500
Reserve Officers	46,000
Total	80,500

ENLISTED MEN

Regular Army, 3 year enlistments	462,000
Regular Army, Reserve and one year enlistments	18,000
National Guard in Federal Service	270,000
Selective Service Trainees	490,000
Total	1,240,000

TOTAL COMBINED STRENGTH

Regular Army	494,000
National Guard	290,500
Reserve Officers	46,000
Selective Service Trainees	490,000
Total	1,320,500

CAVALRY STRENGTH

OFFICERS

Regular Army (plus 2 Philippine Scout Officers)	905
National Guard (in Federal Service)	447
Reserve Officers (on active duty)	1,546
	2,898

ENLISTED MEN

Regular Army	25,920
National Guard	10,644
	36,564
TOTAL COMBINED CAVALRY STRENGTH ON ACTIVE DUTY	39,462

Hundred Percenters

Organizations with 100% membership in the U. S. Cavalry Association (June, 1941).

3d Cavalry, Fort Myer, Va., Colonel W. W. Gordon, Commanding.

4th Cavalry (H-Mecz), Fort Meade, S. Dak., Lt. Colonel John B. Coulter, Commanding.

56th Cavalry Brigade Headquarters, Fort McIntosh, Texas, Brigadier General Walter B. Pyron, Commanding.

102d Cavalry (H-Mecz), Fort Jackson, S. C., Colonel Donald W. McGowan, Commanding.

106th Cavalry (H-Mecz), Camp Livingston, La., Lt. Colonel Mark S. Plaisted, Commanding.

113th Cavalry (H-Mecz), Camp Bowie, Texas, Colonel Maxwell A. O'Brien, Commanding.

1st Cavalry Troop, Reconnaissance, (Sep.), Fort Davis, C. Z., Captain Clayton J. Mansfield, Commanding.

1st Reconnaissance Troop, Fort Devens, Mass., Captain James B. Quill, Commanding.

3d Reconnaissance Troop, Fort Lewis, Washington, Captain Harry W. Miller, Commanding.

4th Reconnaissance Troop, Fort Benning, Georgia, Captain R. D. Palmer, Commanding.

6th Reconnaissance Troop, Fort Riley, Kansas, Lieutenant R. E. Nelson, Commanding.

7th Reconnaissance Troop, Fort Ord, California, Captain Milo H. Matteson, Commanding.

Coincidence

Speaking of coincidences, see if you can top this one! Privates Sid Tepper and Eddie "Duke" Herzog received their draft questionnaires on the same day, were inducted on the same day and from Camp Dix, N. J., were assigned to the Cavalry Replacement Training Center at Ft. Riley. They ate in the same mess hall and bunked together. They were both composers and affiliated with the same company, Broadcast Music, Incorporated. . . . But, until their commanding officer at the Replacement Center (who knows everything about everybody) asked them to compose a Cavalry Replacement Training Center theme song they HAD NEVER MET!

Sid Tepper, composer of "Candle Burning Blue" and "Jim-Jam-Jumpin' Jive," collaborated with "Duke" Herzog, composer of "Love Is" and arranger for Jimmy Dorsey, Claude Thornhill, Henry Jerome and Jack Teagarden, and found their collaboration a "natural."

As quickly as they could write it down, they composed "Men of the Cavalry," and in less than a week the Replacement Center was singing and whistling their lilting marching song. Six thousand copies of the words have been destributed to Cavalry selectees.

These composer-soldiers are now utilizing all their spare time in developing a song writing combination that is being savored by the "rough and ready" outdoor life of the hard-riding, straight-shooting "Hoss Cavalry."

These are two young men who can thank the Army for a happy coincidence, and though they both still think often of the lights of Broadway, they're literally living the "Life of Riley" at Riley, and, what's more, they say they like it!

Okay! Troopers Tepper and Herzog. If you think that you can write a better *Cavalry song* than the one published in this issue, by Colonel Peters (see page 109), hop to it and *don't forget to send us a copy*. Also, your "Men of the Cavalry" song!

Editor's Mail

Editor, The CAVALRY JOURNAL:

Your kind invitation to "Spark Up" with constructive suggestions for improving cavalry supply during battle (page 27, January-February issue of The CAVALRY JOURNAL), is hereby accepted, first, because it is desired to present to your readers a clear idea of the different type rations now available for varying conditions of field service and, second, because the Quartermaster Corps welcomes free discussion of these important supply matters.

We are all interested in "Chow" and those of us who have seen service in the field are particularly anxious that this important phase of Army life be kept up-to-date. For several years the Quartermaster Corps has been conducting experiments to develop the best types of rations and it not only has developed some rather interesting field rations, but also a gasoline-burning field range which is far superior to any field cooking equipment ever used. It eliminates entirely the work required for setting up the old-style range and is ready for operation at any time anywhere. Mounted on trucks, this new range, on which meals can be prepared while the truck is in motion, can accompany units of mechanized cavalry wherever they may go and thus makes possible the use of the "A" and "B" field rations under conditions which formerly necessitated the use of the special or individual reserve ration.

Field Ration "A" in all essentials, is the normal garrison ration and includes perishables.

Field Ration "B" corresponds as nearly as practicable to "A" with the exception that nonperishable processed or canned products such as meats replace items of a perishable nature, such as fresh beef.

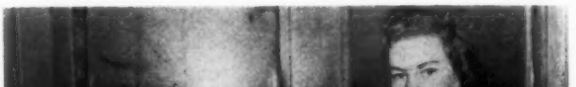
Two new field rations have been adopted as the result of a special study of canned, cooked meals conducted by the Quartermaster Corps in 1934-1936. These new rations are known as Field Rations "C" and "D."

The Field Ration "C" consists of three 12-ounce cans of ready-to-eat meals designated M-Units and three cans, each containing bread, coffee, sugar and chocolate, known as B-Units.

One meat meal or M-Unit is a roast beef hash; one is beef stew, and the third is a meat (part pork) and bean mixture.

The five crackers in the B-Unit contain a generous proportion of whole wheat, whole milk solids, shortening and sugar and are highly nutritious. The chocolate is a one-ounce confection stabilized to resist heat up to 120° F. without melting. The 3/10 ounce of soluble coffee will make eight ounces of fluid coffee. Three individually wrapped tablets of sugar complete the contents of the B-Unit can. One M-Unit and one B-Unit constitute a generous and well-balanced meal. The cans are all of the key-opening type, which makes for convenience in serving. All formulas for this ration were developed by the Quartermaster Corps Subsistence Research Laboratory in Chicago.

The Field Ration "D" consists of chocolate enriched by added cacao fat, sugar, milk powder, oat flour and vanilla flavoring. Thiamin Chloride (Vitamin B_1) is added in sufficient quantity to provide twenty-five In-



ternational Units per 100 calories—Vitamin B_1 is sometimes called the "pep" vitamin. This ration has an energy value of about 2,360 calories per pound. It is produced in 4-ounce pocket-size cakes each wrapped in a sturdy gas-proof wrapper, and withstands heat up to 120° F.

The Field Rations "C" and "D," which have been extensively tested and found to meet every requirement for which designed, are intended for use when circumstances make the Field Rations "A" and "B" unavailable. The Field Ration "C" may be modified by subtracting one M- and one B-Unit and adding one or two bars of the "D" ration.

With reference to your suggestion that the use of larger containers for food may be more desirable I might say that while it would be quite possible and commercially practical to purchase parts of the Field Ration in larger containers, it is doubted that normal usage would justify the purchase. The beef stew and bean mixture could be procured in No. 10 (96-ounce) cans and the roast beef hash could be purchased in 6-pound cans of the truncated pyramid type. The components of the B-Unit could be purchased and packed separately or collectively in standard commercial packages of any desired size. The advantage gained by such packaging would be:

a. Slight saving in cost.
b. Fewer packages to be opened.
c. It would make the Quartermaster's task a little easier.

The disadvantages would be:

a. Inability to issue the exact number of rations required—except by coincidence.
b. It would be of no value to an individual as a reserve ration.
c. It could not be carried by the individual Infantry or Cavalry soldier.
d. Difficulty in heating large cans of hot water; larger vessels required for water and more time for heat penetration.
e. Greater loss through damage.
f. It would make the troops' task a little more difficult.

All factors considered, I believe it is much better to adhere to the use of individual-sized packages, even though the ration be used in circumstances where the organization using the ration is intact.

It is believed that one B-Unit and one M-Unit might very well be used in lieu of prepared sandwiches for the noonday meal for men on maneuvers, and when so used it is considered as one-third of the ration for the day and the Field Ration "A" is reduced accordingly. Army regulations provide for the use of Field Ration "C" only when the use of Field Rations "A" and "B" is impracticable.

I hope you will find it possible to give prominence to these facts equal to that of the editorial "Cavalry Chow" in the January-February issue of your always interesting JOURNAL.

The Quartermaster Corps will be sincerely interested in any comments or questions by your readers because it is only by such free discussion that we can attain the objective sought i.e., the best ration for the Army.

Yours very truly,

Signed: E. B. GREGORY,
Major General
The Quartermaster General.

* * *

EDITOR'S NOTE: Appreciation of the samples of U. S. Army Field Ration, Types C and D, sent us by the Quartermaster General, is expressed to General Gregory. We are convinced of the high quality of these rations and, obviously, this informative letter will be of great value to the numerous cavalry officers who today are on special detail and are not actually with combat troops.

* * *

Congratulations, Colleagues!

Editorial commendation is extended to two service newspapers:

In the mimeographed, non-professional field, we have *The Crossed Sabers,* published weekly by the 2nd Squadron, 11th Cavalry, stationed at Campo (on the Border), California. It definitely reflects initiative, ingenuity, and high morale.

In the professional field, the *Army Times,* "National Weekly Newspaper for the United States Army," published in Washington, D. C., unquestionably is "tops" —and without doubt is destined to become, in this emergency, what *The Stars and Stripes* was to the army in World War I.

The CAVALRY JOURNAL salutes the editors of *The Crossed Sabers* and the *Army Times!*

* * *

Acknowledgment

Your editor appreciates the numerous letters and interesting manuscripts recently received from our readers.

An editor is never so happy as when he has more material than he needs, for then he can discriminate in favor of timely value of published material.

When an editor, particularly of a service journal, receives letters criticizing this and that, or asking for information—or occasionally admitting value received—editorial morale soars, for then he knows that the journal is *alive.*

Your ideas and experience probably are of greater value to other cavalrymen than you, modestly, are willing to believe. So please "continue to exercise." *Deadline date, next issue, July 10th.*

The Armored Force

Reconnaissance Battalion, Armored Division

*By Major I. D. White, Cavalry**

Organization

THERE are three agencies available in the Armored Division which are specifically organized to execute reconnaissance. They are:

The attached air service.
The reconnaissance battalion.
Regimental reconnaissance companies of the armored regiments.

In addition to the above, the execution of reconnaissance is a continuing function of all combat units on the march and in combat.

The availability of specially organized reconnaissance agencies within the division permits the initiation of reconnaissance at the earliest practicable moment. The organization and means of communication within these elements facilitate maintaining contact once the enemy has been located.

The Reconnaissance Battalion is organized with a Battalion Headquarters and Headquarters Detachment containing the elements essential to command, control and administration; two Reconnaissance Companies (Armored); one Armored Company (Light) and one Rifle Company (Armored). It also has an organic Medical Detachment equipped with cross country ambulances.

The Reconnaissance Companies each consist of four 4-car reconnaissance platoons and a motorcycle platoon. The reconnaissance platoons are equipped with scout cars and have motorcycle scouts. The motorcycle platoon is equipped with solo motorcycles and tricycles or the ¼-ton 4 x 4 truck (Bantam). The motorcycle platoon dismounts 16 rifles and 15 sub-machine guns. The Armored Company (Light) comprises three 4-car light tank platoons and a company headquarters. The Rifle Company (Armored) is organized into three 34-man rifle platoons and a special weapons platoon consisting of one 60-mm. mortar section (3 mortars) and a .30 caliber machine gun section of two light guns. The Rifle Company is transported in armored half-track personnel carriers which mount .30 caliber light machine guns.

The Armored Company and the Rifle Company are included in the battalion organization to support and assist the Reconnaissance Companies by furnishing the combat strength necessary to reduce road blocks, penetrate hostile screens, and to seize and hold vital terrain features pending the arrival of advance elements of the division.

Moral attachments include Ordnance and Quartermaster maintenance elements and a specially organized Engineer platoon. The latter organization assists in terrain and route reconnaissance, in constructing or destroying road blocks and in effecting demolitions. It has also available a small number of assault boats to ferry personnel across unfordable streams and can construct, in a very short time, a raft to ferry scout cars and motorcycles.

Function

The function of the Reconnaissance Battalion is to provide the Division Commander with an independent reconnaissance unit capable of performing distant, close and battle reconnaissance. Under average conditions of weather and visibility the attached air service may be expected to provide distant and preliminary route reconnaissance and by obtaining early information of hostile dispositions, permit the focussing of the ground reconnaissance agencies where more detailed information is necessary. However, when the air service for any reason, is prevented from securing information which is obtainable only through distant reconnaissance, the reconnaissance battalion must be prepared to execute such missions.

Distant Reconnaissance

The distance to which ground reconnaissance elements are dispatched depends largely upon the efficacy of air observation. Conditions of weather, darkness or hostile air superiority may prevent or restrict air reconnaissance. Under such conditions the reconnaissance battalion will be required to extend its activities. At other times the battalion may be required to verify or confirm air service reports over extended distances. When performing distant reconnaissance the battalion commander must be closely supported by the regimental reconnaissance companies.

*Commanding 82d Reconnaissance Battalion (A).

Close Reconnaissance

In performing close reconnaissance, the battalion seeks to obtain all possible information concerning terrain, routes and hostile dispositions within a specified area, necessary for the Division Commander to formulate a plan of action and issue necessary preliminary orders for its execution.

Battle Reconnaissance

When the division is committed to combat, the reconnaissance battalion performs battle reconnaissance as follows:

a. It seeks to locate the hostile flanks and rear.

b. It maintains observation at a considerable distance to the flanks in order to give timely information of the movement of hostile reserves and reinforcements and report areas contaminated with persistent gas.

c. It performs harassing operations against hostile command and supply installations and in furtherance of this may execute hasty demolitions.

d. It prepares plans to initiate pursuit, generally by encircling maneuver.

e. It continues more detailed reconnaissance of terrain and hostile dispositions—frequently dismounted.

f. It seeks gaps or soft spots in the hostile lines.

Note: *e* and *f* are generally taken over by regimental reconnaissance companies as rapidly as possible.

Missions and Reconnaissance Instructions

The most important factor in successfully executing reconnaissance missions is a complete and thorough knowledge and understanding on the part of reconnaissance unit commanders of the mission of the division as a whole and the general plan of the Division Commander for its execution. This knowledge and understanding must be maintained throughout operations, especially as the situation and plans are developed or changed. Close liaison must be maintained with the Division Commander through the Intelligence and Operations Sections of the division staff. After contact has been gained and as the main body of the division closes on the battalion, the Reconnaissance Battalion Commander will find it desirable and often necessary, to report in person to the Division Commander or his representative, both to give and receive information.

Initial reconnaissance instructions issued to the battalion are generally simple and include the assignment of a zone or area to be reconnoitered and a brief statement of the information desired. Phase or control lines, the time the information is desired and other measures for control and coördination may be prescribed. The essential features of the reconnaissance instructions are:

a. That the battalion commander understand what information is desired and the general area where it is to be obtained and:

b. That he understand the mission of the division as a whole and the general plan of the commander for its execution.

Within the battalion, more elaborate and detailed instructions are necessary. Zones, routes or areas of responsibility must be clearly defined for each reconnaissance company. Measures for control and coördination must be clearly specified. Missions to subordinate reconnaissance elements generally take the form of specified questions.

After contact has been gained or as a result of information obtained from air reconnaissance additional and more detailed and specific missions may be assigned to both the Reconnaissance Battalion and then in turn to its subordinate units.

It is extremely important that the battalion commander be kept informed of information and intelligence received by G-2 from other sources. One of the functions of the battalion liaison officer maintained at division headquarters is to facilitate and expedite transmission of such items to battalion headquarters.

Standing Reconnaissance Missions

The assignment of missions and the issuing of reconnaissance instructions is greatly simplified and facilitated by means of *Standing Operating Procedure* which prescribes standing reconnaissance functions for all reconnaissance agencies. These reconnaissance functions apply to all reconnaissance elements regardless of size; are carried on automatically without additional orders and in conjunction and coincident to the execution of specified missions.

These automatic functions require that information covering the following items be obtained:

Item No. 1—Contaminated Areas.

Includes the location, size of area, and type of gas encountered.

Item No. 2—Hostile Forces Other than Mechanized or Motorized.

Includes strength, composition, movement, location, and disposition of hostile forces which are not mechanized or motorized.

Item No. 3—Hostile Aircraft.

Includes type, altitude, and direction of flight of hostile aircraft observed.

Item No. 4—Hostile Mechanized and Motorized Forces.

Includes strength, composition, movement, disposition, location and type of hostile mecz and mtz elements.

Item No. 5—Communication.

Includes water, light, power, railway facilities, telephone and telegraph stations, and radio stations.

Item No. 6—Supplies.

Includes gasoline, oil, food, and other types of supplies suitable for the use of the division.

ITEM NO. 7—LANDING FIELDS.

Includes landing fields suitable for aviation attached to the division with special attention to landing fields for courier type planes.

ITEM NO. 8—ROUTES AND BRIDGES.

Includes type, location, number of lanes, usableness in wet weather, and suitability for all vehicles of the division. Includes obstacles, road blocks and other defensive works.

ITEM NO. 9—ESTIMATE OF TERRAIN.

Includes the suitability of terrain for mechanized attack, assembly positions, cover, and concealment.

ITEM NO. 10—FRIENDLY TROOPS AND MISCELLANEOUS.

Includes friendly troops within the sphere of action of the reconnaissance battalion and other intelligence data not included in other items pertinent to the operation, such as weather, visibility, etc.

Reports on these items may be required to be rendered as soon as obtained; hourly; or at specified times or places.

An understanding by all concerned of these standing missions, gives the word "reconnoiter" definite substance and meaning.

COÖPERATION WITH THE AIR SERVICE

Air service missions are closely linked to the successful operation of ground reconnaissance agencies. In addition to any planes for division missions, it will be frequently desirable to assign one plane for close and direct coöperation with the reconnaissance battalion. The function of the plane is to conduct route reconnaissance; to direct the attention of subordinate elements on suspected areas; and to assist in control coordination and communication within the battalion, especially during periods when radio communication is not possible or desirable.

When a plane cannot be made available for direct attachment to the battalion, any planes performing air reconnaissance missions coöperate to the fullest extent. Observers are kept informed of the zone of operations of the battalion, particularly of the axis of march of the battalion command group. The battalion and each reconnaissance company maintains a radio set in the division air ground net and all concerned take necessary action indicated as a result of intercepted messages. It will frequently be desirable under certain conditions, for planes executing division missions to insure that vital information is transmitted direct to the reconnaissance battalion, either by radio, or more frequently by dropped message.

COÖPERATION WITH REGIMENTAL RECONNAISSANCE UNITS

Regimental reconnaissance companies, functioning under regimental or column commanders, perform more detailed reconnaissance than that of the Reconnaissance Battalion. Based on information received from the *division* reconnaissance elements, both air and ground, the attention of regimental units is closely directed to specific routes or areas. When the elements of the reconnaissance battalion have gained contact and are held up, regimental units close and gain contact with divisional units within their respective zones. They assist and coöperate in every way to secure the continued advance of the divisional reconnaissance elements. Regimental units also relieve reconnaissance battalion elements which have been left to guard bridges or hold vital terrain. The latter units then either push on and rejoin, or become attached to the regimental units, depending on time and space factors and enemy activity. Regimental units must conduct the detailed reconnaissance necessary to locate small bodies of hostile troops and secure accurate information of routes and terrain features not covered by the Reconnaissance Battalion.

SECURITY

Security for the division other than that furnished by timely information of the enemy; is not a function of divisional or regimental reconnaissance agencies, except as follows:

a. Vital stream crossings or other defiles must be guarded along the route of advance of division columns, pending the arrival of advance elements from the main body.

b. Hostile threats which may develop within or adjacent to the battalion zone and which may seriously interfere with the movement of the division, must be delayed, pending further instructions from the division commander. Column commanders cannot expect either division or regimental reconnaissance elements to perform the security functions expected and required of an advance guard.

OTHER MISSIONS

Obviously, the Reconnaissance Battalion is organized and equipped to perform missions other than reconnaissance when necessary. Such missions will often include the following:

Security.
Delaying and harassing action.
Seizing and holding key terrain.
Participation in combat with the division.
Pursuit.
As a division reserve.

It must be prepared at all times to execute any of the above missions upon completion of a principal reconnaissance mission.

While it would be exceptional to assign a dual mis-

sion to the battalion, the execution of one type of mission may require a temporary transition to another type. It may also be necessary under certain conditions for different elements within the battalion to be performing different types of missions. However, the collection and transmission of information always receives the utmost attention, regardless of the assigned mission.

Combat

Many reconnaissance elements have ruined their effectiveness through too great a willingness to engage in combat. Fleeting but minor targets often present a temptation almost too much to be resisted. The desire to engage in combat must be overcome and controlled by the leaders of small reconnaissance elements. Whenever possible, subordinate units should be advised as to the extent or the necessity for engaging in combat. However, the final decision rests with the leaders of the platoons, sections and individual vehicles. Leaders must be guided by the principle that the best reconnaissance is performed by stealth and that when the presence of their unit has been disclosed to the enemy by the noise incident to combat, the enemy will bend every effort toward their destruction and will institute a relentless search toward that end.

A reconnaissance element whose presence has become disclosed to the enemy can expect to be hunted down as its continued existance is an ever present menace to the enemy, not because of its combat power, but because of its ability to furnish information.

Missions may be assigned which will require combat for their accomplishment. Certain missions may require a combination of reconnaissance and security. An example of such a mission would be—"reconnoiter Highway 77 to BLANKTOWN and hold the NORTH RIVER crossing at that point pending the arrival of units from the main body."

At times, units which find themselves cut off from their own forces will frequently find it necessary to fight their way out. On the other hand, if stealth is employed under such conditions there is a possibility that the advance of the main body will restore their own freedom of movement. It should be remembered that a reconnaissance unit which has penetrated the hostile forces to such an extent that it has become cut off has placed itself in the most desirable position to secure valuable information.

The whole question of combat can be summed up as follows: Reconnaissance elements engage in combat when necessary to accomplish their mission; when given a definite combat or security mission; or to provide for their own protection.

Tactical Employment

The method of employment of the reconnaissance battalion and the method of execution of a reconnaissance mission is generally based on the amount of time available for its execution. When sufficient time is available, the principle of stealth is employed to the maximum advantage and combat is avoided. Where time is pressing and division columns are closing on the reconnaissance elements, combat must be resorted to more frequently. In a moving situation the battalion will operate from 25 to 150 miles in advance of the division. Frequently the battalion will move during the night to the area from which it will commence its operations. Sufficient time must be allowed to conduct reconnaissance before division columns close up. Satisfactory reconnaissance cannot be conducted at the rate of march of division columns.

A simple tactical situation, illustrated by a diagram (below) will serve to show the actual tactical functioning of the reconnaissance battalion.

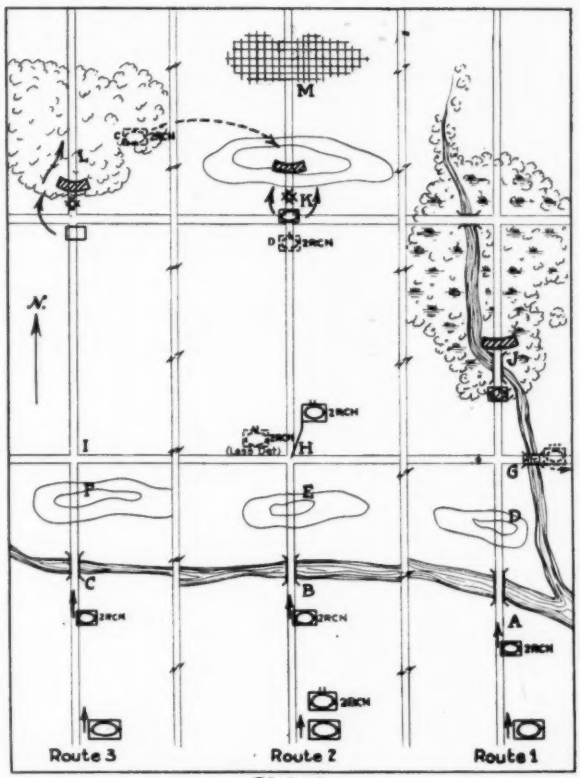


Plate 1

In this situation the Reconnaissance Battalion has been assigned the mission of reconnoitering the zone between Routes 1 and 3, both inclusive, to report on a hostile force reported in the vicinity of M and to pay particular attention to the high ground in the vicinity of K. Streams shown are unfordable. The division is to march in three columns via Routes 1, 2, and 3.

The zone was subdivided to the two Reconnaissance Companies and small elements from the rifle company were attached to each, to be left to guard the bridges at A B and C.

Battalion Headquarters with the Rifle Company (less detachments) and the Armored Company,

marched on Route 2, fifteen minutes in rear of the reconnaissance element on that route.

Pending information from the Reconnaissance Companies the Battalion CP was established at CRH. Meantime the rifle elements left to guard the bridges were relieved by advance elements from the division and rejoined the battalion at H.

The reconnaissance unit on Route 1 reported that it was held up at the bridge at J and thus far had been unable to side slip because of the type of terrain.

The reconnaissance unit on Route 2 reported strongly defended road blocks in the vicinity of K and attempts to reconnoiter the high ground in this vicinity by vehicular reconnaissance have been stopped by hostile fire. Dismounted patrols from the motorcycle platoon have been sent out.

The reconnaissance unit on Route 3 reported that it was initially held up by road blocks in the woods near L, but that part of this unit has been able to side slip to the west and is continuing reconnaissance to the north.

The battalion (less detachments) moved forward initially on Route 2. Based on information received and as the result of personal reconnaissance, the battalion commander decided to attack in order to determine the strength of the hostile forces opposing his advance, and to seize the high ground in the vicinity of K.

The attack was based on the following plan:

The Armored Company (Light) to attack the hostile right and rear from the vicinity of the woods east of L.

The Rifle Company (Armored) and reconnaissance elements now in contact to support the tank attack by attacking generally astride Route 2.

During the progress of this attack, the air service reported a hostile motorized force approaching G, from the east. Part of the Reconnaissance Company (including its motorcycle platoon) which has been operating near J was ordered to gain contact with this hostile force and delay its advance.

Assuming that the attack of the battalion has secured the high ground near K, the way has been cleared for reconnaissance elements to continue their advance toward M. Necessary steps are taken to hold the important terrain in the vicinity of K, pending the arrival of elements from the main body.

Conclusions

Experience has developed the following principles which are applicable to reconnaissance performed by all types of armored units:

a. The basic principles of Scouting and Patrolling are applicable to the execution of reconnaissance by all armored reconnaissance units.

b. Time being available, the best reconnaissance is performed by stealth. Where time is pressing, combat must be resorted to.

★ ★ ★

Division Review

By Private Joseph P. Denove, 17th Engineers

THERE were men—10,000 of them. There were machines—2,500 of them. There was wind and rain and a darkened sky. They all came to a huge bare field and were reviewed in their turn by Major General George S. Patton, Jr., and a handful of civilian spectators who witnessed the recent review of the entire Second Armored Division. It was a proud day for General Patton, for those men and machines were his own Division on parade. It was a proud day for the spectators, for to them the Division meant a speedy fighting unit that might one day defend them. But, to this lone selectee, it brought what was at once the simplest yet the most impressive thrill sustained in his 25 years of life.

Lost in an avalanche of men and machines, the chill rain pinging away at his steel trench helmet, he could feel the immensity, the gargantuan proportions of this thing of which he was now a part—Uncle Sam's Army.

Seven weeks removed from a home in the Bronx, N. Y., a job on a newspaper in the big city, his Army life had been no different from any of the other 5,000 selectees in the Second Armored Division. He marched on a dusty drill field beneath a hot Georgia sun. He was taugh how to shoot a rifle, a machine gun, and a pistol. He was taught military courtesy and learned to salute officers. He did many things but never saw more than a scattering handful of soldiers at one time.

To him, then, as he sat in a Headquarters Company truck of the 17th Engineers, to which he is assigned, came a thrill he had never before experienced.

A constant chill—the kind he used to get back in his grade school days when the class began singing the National Anthem—raced up and down his back as his eyes reached out to the farthest corners of the field. Over one hill came rumbling, churning tanks, bristling with mounted guns, and his eyes opened wide. And then

REVIEW OF SECOND ARMORED DIVISION

1—Major General George S. Patton, commanding the Second Armored Division, and Brigadier General Alvan C. Gillem, commanding the Second Armored Brigade, watch the review from General Patton's light tank. General Gillem is now commanding the Third Armored Division at Camp Beauregard, La. It will be permanently stationed later at Camp Polk, La. 2—Six-ton armored scout cars, their crews and drivers almost hidden, rumble down the field for the commanding general and his guests.

REVIEW OF SECOND ARMORED DIVISION

1—Light tanks poke their 37-mm. snouts to the fore as they wait for the parade to begin. 2—Across the face of the huge field the command cars (foreground) and scout cars (background) are drawn up in formation.

trucks, filled with trim, uniformed and helmeted men. Then guns—big guns, trailing behind the trucks. Then motorcycles—many, many times the number he had seen being ridden by New York's finest in a St. Patrick's Day parade—flooded down the center of the field. Everywhere his eyes turned, there were men and machines. Once as he turned his head to the rear, he saw other trucks, of weird shape and design.

"What outfit do they belong to?" he asked anxiously of a buddy.

"They're the 17th Engineers. . . ."

Surprise of surprises, the very organization to which he himself belonged. He had only been with the engineers for a day or so, and he hadn't come in contact with these strange machines—earth augers, concrete mixers, bull-dozers, gas shovels, etc. Immediately, then, his eyes turned to the head of his column where stood Major Howard L. Peckham, the battalion commander, and his chest swelled with pride. It might have been hero-worship, more likely not, as that was something that so-called hard boiled New York had long ago forgot. It was respect.

Finally, the machines settled into position. The noise of those rumbling motors died away abruptly. Only the sound of regimental flags, whipping in the breeze could be heard above the driving rain. Suddenly from another corner of the field, a tank flying two flags, one red, the other green, its turret sporting red, white and blue stripes, raced for the reviewing stand.

That selectee didn't have to ask. He knew it was the general—General Patton—come to review his division.

Later, even as the General's inspiring words fled from the loudspeaker, that rookie private was sure, dead-sure, that the division had gone on review for him, to try to tell him what it means to be a soldier in the United States Army.

THE NEW MEDIUM TANK

Fire-power plus—a 75-mm. gun, a 37-mm. gun, and a pair of machine guns are seen in one bristling picture.

Field Supply of a Cavalry Regiment (H&M)

By Major Mitchell A. Giddens, 4th Cavalry

DURING the maneuvers in which the 4th Cavalry has participated since its reorganization on February 1, 1940, this regiment has used a system of supply which has proved successful in feeding the regiment three meals a day and furnishing other available supplies when needed. At times minor modifications in the methods described were necessary to meet the requirements of the rapidly changing situations and tactical movements of the regiment. At no time were the essential elements of the plan changed.

Every supply plan is based upon certain principles. These principles are enumerated in Field Service Regulations and in Notes on FSR—Administration (published by the War Department on March 13, 1940). Three of these principles are repeated here to stress their importance as particularly applicable to the supply of the Cavalry regiment (H & M).

(1) Troops must not be encumbered with a greater quantity of supplies and impedimenta than is necessary to assure their mobility and readiness for action.

(2) The supply system must be based upon the fundamental principle that the combat troops should not have their attention diverted from their task of defeating the enemy by anxiety concerning their supplies. Therefore the impetus of the movement of supply is from the rear which so organizes its services that routine requirements are replaced automatically.

(3) The cardinal principles of the system of supply are: simplicity, flexibility, elasticity and mobility.

TROOPS

	Hq.	Serv.	A	B	C	Hq. 2nd Sq.	E	F	G	Attchd. Med.	Total Regt.
Scout Cars							1	1			2
Ambulance										2	2
Trucks, ¼-ton (Bantam)	1	12							2	2	17
Trucks, ½-ton, C.-R.		3									3
Trucks, ½-ton, P.U.	1	2				1	1	1	1	4	11
Trucks, 2½-ton, Cargo											
Ammunition		6									6
Combat	2	1	1	1	1		1	1	2		10
Gasoline and Oil		6					1	1			8
Kitchen	2	2	1	1	1		1	1	1		10
Troop Motor Maint.	1	1					1	1	1		5
Regtl. Motor Maint.		3									3
Truck, Wrecker		1									1
Truck-Tractor, W/Semi										3	3
TOTAL VEHICLES	7	39	2	2	2	1	6	6	7	11	83

There are five classes of supply. Briefly they are:

Class I—Rations, forage, fuel and credit items such as cleaning and preserving supplies, soaps, toilet paper, etc.

Class II—Tables of Basic Allowance items of clothing and equipment.

Class III—Gasoline and lubricants.

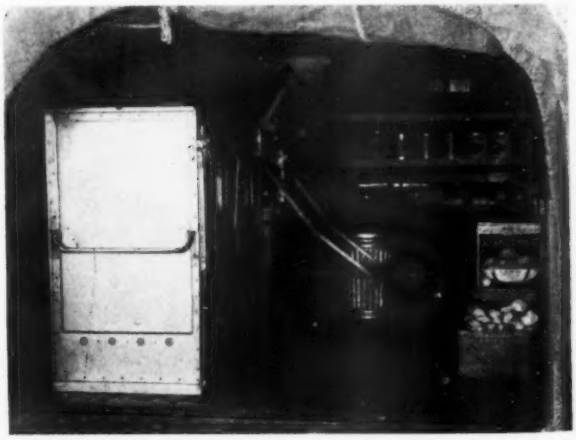
Class IV—Medical supplies, Signal supplies, Engineer supplies, Chemical Warfare supplies, Motor Maintenance repair supplies and special supply requirements.

Class V—Ammunition.

The 4th Cavalry supply plan is based on detailed attention to the supply requirements of the regiment in the field. Classes I and III supplies must be furnished daily; Class II supplies must be replaced periodically; Class IV supplies must be furnished invariably on call to meet emergency requirements; and Class V Ammunition must be supplied during combat as needed. It is necessary that the requirements of the regiment be known if the regimental plan is to function smoothly. To this end S-4 maintains a detailed logistic chart from which regimental supply requirements can be quickly estimated.

The 4th Cavalry Train is listed by vehicles and organization in the accompanying chart.

The daily routine followed in this regiment is illustrated in the following time schedule. The times given are approximate only as the higher headquarters under which the regiment is operating designates the time



Kitchen truck

for making reports and issuing supplies. Regardless of time this supply routine is normally accomplished every twenty-four hours.

7:00 AM—Daily telegram to higher headquarters giving strength of regiment in personnel and animals and the estimated gasoline requirements of the regiment.

2:00 PM—Preparation of evening meal.

4:30 PM—Troops report ammunition expenditure to regimental CP. Upon receiving this information S-4 sends replacement ammunition forward on the kitchen or combat truck.

Dark —Leave rear echelon with the kitchen, impedimenta, and gasoline and oil trains for the regimental CP, at which point trucks are dispatched to the troop CP's. When necessary the troops furnish guides.

7:00 PM—Regimental ammunition expenditure report to higher headquarters.

9:00 PM—Draw Class I supplies at designated supply point.

11:00 PM—Draw ammunition at designated supply point.

1:00 AM—Refill or exchange empty gasoline drums at the gasoline supply point.

Dawn —All elements of the regimental train have returned to the rear echelon.

On Call —Repair parts for motor maintenance not on hand in the regimental motor maintenance platoon are obtained from the appropriate service supply point by the regimental motor supply sergeant.

How does S-4 carry out this daily routine? Let us take each class of supply and follow it through from the method used to obtain supplies from the higher echelons of supply until they reach the troops.

Class I—The daily telegram informs higher headquarters of the strength of the regiment in officers, warrant officers, enlisted men and animals. This is the basis in furnishing the regiment its requirements of automatic Class I supplies (rations, forage, etc.). These supplies are normally received by the regiment three days later. The daily telegram is based upon figures furnished by the troops to the Adjutant, who obtains the morning reports from the mess sergeants upon their return from feeding the troops their breakfast. Thus by utilizing the mess sergeants to receive this information from the troop first sergeant during breakfast, accurate figures become available to the adjutant without loss of time.

Feeding the regiment when it is scattered on reconnaissance requires careful planning by S-4 and the mess sergeants.

At 2:00 PM there is still one ration on the kitchen trucks.

In order that cooking can be done in bivouac, or on the march, our kitchen trucks have been fitted with removable frames and shelves for the storage of rations and equipment so that the cooks will have space in which to move around and work conveniently. While it is not normal to cook when on the move it has been done and is easily accomplished when necessary to do so.

At any rate supper is prepared and ready to serve by 5:30 PM.

This regiment is equipped with marmite cans which contain three inserts. When supper is ready these cans are preheated and the prepared food is dished out from the cooking utensils into the inserts. Each marmite can contains items of the cooked meal so that upon arriving at the troop CP, hot food can be sent forward to the detachment without delay. With proper planning by S-4, troop commanders and the troop mess sergeants every troop can be fed quickly and easily regardless of the fact that part of the troop may be on duty away from the troop CP. The use of marmite cans permits a latitude in the feeding of the regiment not previously available to it.

The cooking utensils are then cleaned and made ready for cooking breakfast.

S-4 has to be kept informed on where all troops are located and especially where the Pioneer and Demolition Platoon and the Antitank Platoon have been attached. At this time he adjusts the supper rations between troops so that there will be sufficient food in the kitchen trucks required to feed attached personnel. The adjustment of rations at this time is essential and must fit into the regimental commander's plan of action, particularly if moves are to be made during the night. S-4 is the key individual in making this adjustment and to accomplish it he must keep himself fully informed as to where all elements of the regiment are located.

We are now ready to feed the regiment. At dusk the regimental commander orders the kitchens forward. S-4 immediately takes them to the Regimental CP and, after consultation with the Operations Officer, the kitchens are dispatched to their respective troops. Upon reaching the troop bivouac, supper is served. Detachments on outpost duty or reconnaissance screens are either relieved or food is sent forward in the marmite cans and served to them in relays while the detachment continues to perform its mission. Vehicles other than the kitchen trucks are used to carry food to outlying detachments. The kitchen truck remains at the troop bivouac until breakfast is served and lunches issued. The mess sergeant then gets the troop morning report from the first sergeant and returns to the rear echelon.

Other Class I supplies go forward in the same manner on the troop combat truck. When hay is issued an additional truck per horse troop is required.

In the meantime S-4 after dispatching the kitchen trucks to the troop bivouacs, has returned to the rear

echelon. The regimental supplies are at the supply point ready for issue. If supplies are not being delivered to the regimental bivouac by the trains of higher echelons the first question that arises is, "How many trucks are required for Class I supplies?" This is determined quickly as follows:

$$\text{Ration trucks} = \frac{\text{strength of regiment X 5}}{\text{truck payload in pounds}}$$

$$\text{Forage trucks} = \frac{\text{No. animals X 12 (X 2 if hay is issued)}}{\text{truck payload in pounds}}$$

Sometime after 8:00 PM S-4 departs from the rear echelon with sufficient vehicles to carry all expected supplies plus one additional vehicle, if available, for unexpected supplies and to take care of a breakdown if it should occur. Upon reaching the supply point the army troops thereat load the regimental supplies on the empty vehicles. On returning to the rear echelon, S-4 immediately sends hay to the horse troops and then unloads and sorts the other supplies into troop issues in accordance with that day's troop strength reports as given in the daily telegram. Issues are made direct to troop kitchens on their return to the rear echelon from feeding breakfast.

Class II—All supplies of clothing and organizational equipment are obtained by requisition through regular supply channels. These supplies when received, are normally issued to the regiment at the supply point from which the regiment receives its supplies. S-4 issues these supplies at the same time and in the same manner as for Class I supplies.

Class III—The daily consumption of gasoline by a reconnaissance regiment will vary within wide limits. This variance is due entirely upon the operations that the regiment is called upon to perform. The estimated gallons of gasoline that the regiment requires to replace its daily consumption is given to the higher headquarters in the daily telegram.

Gasoline and oil supply to the troops is accomplished by sending the gasoline and oil trucks forward with the rations. In the regimental train chart it will be noted that the regiment has eight gasoline and oil trucks. Each of these trucks carries 60 gasoline drums of 10-gallon capacity each, and in this regiment 100 gallons of oil. Other vehicles of the regiment carry a total of 460 drums of gasoline as an extra supply for the vehicle on which each of these drums is carried. There are 480 drums of gasoline in the gasoline train of the regiment. Therefore, there are sufficient drums available in the gas and oil sections to exchange full drums for the empty ones in the troops. The exchange is accomplished by having the gasoline and oil trucks of Troops "E" and "F" plus one gasoline truck from the RSO Section refill the 2d Squadron, while one truck refills Headquarters Troop and the balance go to Service Troop. The empty drums are then sent to the gasoline supply point for refilling or exchange. If additional gasoline is required by the reconnaissance troops it is supplied upon return of this train from the supply point.

Class IV—The main supplies of interest in this class are motor maintenance supplies. These supplies are obtained either on requisition or work order. Invariably the part required to repair the vehicle is classed as an emergency. This is true in the sense that any vehicle not in running order tends to immobilize the regiment. Therefore supply of repair parts for motor maintenance is accomplished upon call. The Regimental Maintenance Section works in close coöperation with the Regimental Supply Section to obtain these parts. A limited amount of essential spare parts is carried on each of the maintenance trucks. As these spare parts are consumed the Troop Maintenance Section notifies the Regimental Motor Maintenance Platoon, which replaces the item from its supply, if available. Daily, or more often if necessary, the motor supply corporal of the Maintenance Platoon furnishes the regimental motor supply sergeant with a list of spare parts used and of any other parts required. The parts are then obtained direct from the service maintenance company charged with the supplying of these items to the regiment.

Signal supplies are obtained on requisition. The Communications Officer keeps the Regimental Supply Section informed of his needs in order that communications may be kept in operation. These supplies are furnished as quickly as available. All communication supplies and parts are issued to the troops through the Communications Officer.

The other Class IV supplies are obtained on requisition through the regular channels and issues are made by S-4 direct to troops.

Class V—Ammunition supply is a major problem. However, with the allowance of six ammunition trucks for the cavalry regiment (H & Mech) in the new Tables of Basic Allowances the problem has become lesss acute. These six trucks can carry a day of fire for the guns of the regiment. Notes on FSR—administration state, "The ideal situation is to have at all times within easy access from machine gun positions an amount of ammunition equal to the expenditures to be made from that position plus the prescribed loads of the unit ammunition vehicles." If and when this regiment is really called upon to fight these vehicles can meet the ideal situation only if the supply impetus from the rear makes ammunition available within easy access to the regiment. Prescribed ammunition allowance of the cavalry regiment (H & Mech) exceeds 600,000 rounds. However, the cavalry regiment (H & Mech) is primarily a reconnaissance regiment and under normal operations replacements of ammunition will be accomplished each night by sending the required amount forward in the combat trucks and/or in the kitchen trucks. The troop ammunition expenditure reports are made to the Regimental CP at 4:00 PM before the rations are sent forward. If necessary

these expenditures are replaced at once, otherwise when the combat trucks and/or the kitchen trucks go forward to the troop bivouacs they take the necessary replacement ammunition to their troop.

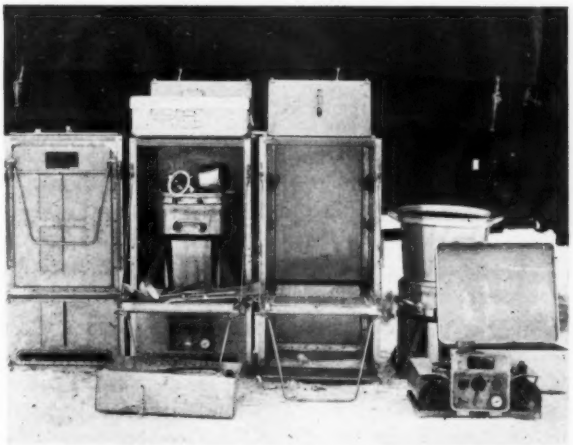
S-4, upon receipt of the ammunition expenditure reports from the troops, consolidates the regimental report and forwards it to the higher headquarters in order that the regiment will receive additional credits of ammunition at the ammunition supply point. Each night, at the designated ammunition supply point, S-4 draws against the regimental credit sufficient ammunition to replace all expected expenditures within the next twenty-four hours.

It is attention to details and daily routine of operation plus a thorough knowledge of the supplies within the regiment that makes a system of supply operate smoothly. Particularly in the field, supply must function like a well oiled and synchronized machine. To accomplish any plan of supply in the field successfully one bit of information must be available to the S-4; that is, the location of the supply point where he is to draw supplies. If this is not available he must go to the proper headquarters and obtain this information. Frequently during the Louisiana Maneuvers this information was lacking to the regiment due to the rapidly changing situations. Sometimes the opposing forces were occupying the very spot where the supply point for the regiment had been designated. When these events occur higher headquarters must be notified in sufficient time to change the supply point before the supplies arrive. If this is done and the supply points are known the routine of supply described will operate successfully.

To reiterate the 4th Cavalry supply plan. It is as follows:

1. Preparation of supper in rear echelon.
2. Utilizing marmite cans which have three inserts to carry supper forward to the troops for feeding.
3. Cleaning all cooking utensils before going forward to feed the troop in order that breakfast may be prepared with the minimum of delay and noise and permitting additional water to be carried.
4. Kitchen trucks when going forward to feed the troops go first to the Regimental CP and check upon the exact location of their troop CP before proceeding to troop areas.
5. Troop kitchens remain at troop bivouac to feed breakfast and issue lunches before returning to the rear echelon.
6. When the kitchen truck returns to the rear echelon the troop morning report is sent to the Adjutant.
7. S-4 normally makes issues at the rear echelon for all classes of supply except for Class III (gasoline and oil) which are issued direct to troops wherever they may be located.

It must be borne in mind that if troops can be fed in the forward areas it should follow that other supplies can be furnished at the same time and in the same manner and to the same extent as rations.



New gasoline burning field range

Supply of a Horse Regiment

By S-4

EDITOR'S NOTE: *This is the third of a series of articles on this subject.*

IT was a good thing S-4 had been able to get to bed early and sleep well, where we left him at the close of our last installment. At about 3:00 AM a staff officer from division arrived at the regimental bivouac bringing orders and directions which served to change the regimental commander's plan of action for the next day.

The division mission had been changed by Army and this change required that the regiment change its direction of advance marching to a river line approximately twenty miles distant, where it was to hold an extended front along the river until the arrival of the division under cover of darkness late that night (Wednesday-Thursday). The division reconnaissance squadron would be operating beyond the river line after 6:00 AM the next morning and would keep the regimental commander advised of any developments in the enemy situation.

After a map study the regimental commander decided that because of the poor road net in the direction of advance the regiment would march as two detachments upon its departure from the present bivouac; thus considerable distance would be saved for one portion of the regiment. The decision was that one detachment would consist of a reinforced squadron, the other the regiment (less). S-3 immediately designated the 1st squadron as one detachment; to be reinforced with:

One platoon of heavy machine guns.
One platoon caliber .50 machine guns.
One section of the scout-car platoon.
One section of the motorcycle platoon.
One pack radio set.
Certain other personnel and transportation from headquarters troop as listed in Table of Organization 2-12.

Under these circumstances what should be the first consideration of S-4? Do his previous recommendations to the regimental commander for tomorrow's march, which have since been issued as orders, apply? In all respects, except possibly one, they do: the regiment now has a holding mission, and to accomplish its mission it may have to fight at any time. Is this combat so probable that S-4 should recommend all riflemen carry the extra bandoleer of ammunition upon departure in the morning? A consultation with S-3 will help; to learn all that is known of the enemy situation, and also what S-3 thinks about carrying extra ammunition on the horses all day. Being properly imbued with the belief that the horses should not carry any excess weight unnecessarily, these two officers decide between themselves that the extra ammunition should be carried in the trucks. Hence S-4 does not change his recommendation to the regimental commander, and no "change in orders" to the troops is necessary in this respect.

The next consideration is to make the arrangements necessary to enable the S-4 of the 1st squadron to handle his individual problem of supplying that squadron while it is separated from the regiment. While early combat tomorrow is not probable, still it is always possible, and should it develop, then the squadron S-4 must have the required supplies and means of their transportation under his control. Table of Organization 2-12 informs us by "Note" that certain transportation will accompany a detached reinforced squadron. This note prescribes six trucks of the regimental train; the two trucks allotted to each of the rifle troops of the squadron. Our S-4 is a practical supply officer. He knows that rations, grain, gasoline, oil and ammunition for the reinforcing elements attached to the squadron must be transported on the squadron train. Is there a more practical way than the one prescribed by the note to the table of organization?

Following the prescribed method will result in division of rations, grain, gasoline, oil and ammunition pertaining to the reinforcing elements on six different trucks. Also the cantle rolls of the mounted men should be carried on trucks: no sound reason exists for requiring the horses to carry this extra burden. The result will be that the greater portion of the supplies and cantle rolls of these elements will not be where wanted when wanted. Instead they will have to be collected, if possible, at the time needed. And there is the further problem of getting these supplies onto the troop trucks in the first place: a mean job at best. Of course S-4 can leave it all up to the squadron S-4 if he is that kind, but instead he takes seriously the maxim that "a good staff officer assists the staffs of lower echelons."

S-4 solves this very practical problem by attaching one additional truck (making seven in all) to the 1st squadron. Depending on his relations with the regimental commander he makes this decision himself, or submits it as a recommendation. Either way, a practical regimental commander will approve the idea. Where will the extra truck come from? Both the machine-gun and the special weapons troop have two combat "ammunition" trucks. S-4 takes one of these trucks from the machine-gun troop. That troop has a troop headquarters ammunition pack section consisting of twelve packs; its truck ammunition loads are all of one classification; it can better serve the troop (less one platoon) in

combat than could the special weapons troop under similar conditions, hence the truck should come from that troop.

Though it is the "middle of the night," immediate action is necessary if the regiment is to march at daylight. S-3 has been busy and the squadron commanders are at the regimental CP getting their orders. Likewise the troop commanders of headquarters, machine-gun and special weapons troops are there. S-4 informs these troop commanders that machine-gun troop will furnish the extra truck, and directs that troop commander to have the truck pick up rations, grain and ammunition in required quantities from the other two troops according to the attachments from those troops, and to spot the truck at a designated point for loading of cantle rolls in the morning, if they cannot be loaded at the same time supplies are picked up. Orders to the driver relative to where and when to join the other trucks of the 1st squadron will be issued by the truckmaster.

What has S-4 gained by his practical solution, and flaunting of the Tables of Organization? The reinforcing elements will most probably be marched and employed by the squadron commander as separate units; not attached to any one of the rifle troops. It is true their rations will have to be cooked by the rifle troops, but which one, or two: foresight cannot answer this question, now. The load for all these elements is concentrated on one truck and is not widely separated. Rifle troop trucks are not overloaded, nor does some rifle troop have to march with cantle rolls on the saddle in order to carry the extra load of supplies in their truck. Ammunition under this condition must be considered the prime, or principal, load, and the truck must be loaded so this will be readily accessible. From a practical point of view S-4 is one up on the brass hats and it's better than an even bet that the personnel and animals of the reinforcing elements will feed better; have all their own property when it's over; and be better served in combat than if the prescribed method had been followed.

Prior to the departure of the 1st squadron commander from regimental headquarters S-4 requests him to send his squadron S-4 to headquarters as soon as convenient. He employs the time until the arrival of that individual to advantage: digs the regimental supply sergeant out of bed, informs him of the attachments to be made to the 1st squadron, and directs him to go to the machine-gun troop and supervise the collection and loading of rations, grain, gasoline, oil and ammunition from the three troops furnishing detachments. This detail might have been left to one of the troops, but by using one of his own men—one who has experience—S-4 insures proper amounts of supplies and that the components of the ration "donated" by each troop will result in a full well-balanced ration. The regimental supply sergeant has enough authority as well as experience to do this job better than it would probably be done were it left to one of the troop non-coms. Next he rouses the regimental transportation officer, informs him of the changed plans, and gives him directions as to personnel and vehicles to accompany the 1st squadron.

Upon the arrival of the squadron S-4 he furnishes him with all the information in his possession: trucks which will be available to him; previous plans as to supply which still govern, i.e., planned method of delivery of supplies, location of railheads and truckheads, restrictions on operations of convoys, location of the Army ammunition depot, and credit of ammunition therein; in short, all information necessary to enable the squadron S-4 to function effectively should the squadron become detached from the regiment for a protracted period. He learns from the squadron S-4 the time and place the truck from the machine-gun troop will join the squadron train: later this information is given to the transportation officer. He "advises" the squadron S-4 that provided the regimental commander does not direct otherwise he intends to march the regimental train (less trucks detached) grouped under his control, by bounds in the rear of the regiment, ammunition trucks in the lead: a hint to the junior staff officer. He informs him that instructions as to method of delivery or obtaining supplies Wednesday night will be sent to him through command radio channels or messenger, and that in the event a resupply of ammunition becomes necessary during the day he will dispatch trucks direct to the Army ammunition depot.

By the time S-4 has accomplished the details outlined above it is time to eat that good "hot" breakfast provided by thoughtful troop commanders in the field for their men. Also at the same time he is issued the daily waste of a "cooked" lunch, and his two cans of the Type "C" ration. At breakfast he informs the transportation officer of the formation and point where he wishes the regimental train (less detached trucks) formed, fifty minutes after the departure of the regiment. He is careful to indicate that he wants all the ammunition trucks placed ahead of the kitchen trucks in forming the train column. If S-4 or the transportation officer knows at this time the order troops will march in the regimental column, the order in which the trucks should be formed is known. If they do not have this information it is the business of the transportation officer to find this out when the regiment marches. It may look like a small detail, and it is, but when trucks are needed they may be required in a hurry. Having them in the same order in which the troops are marching helps tremendously in getting them to the right troop without confusion and delay.

S-4 contacts S-1 (adjutant) and gives him information to be sent to division with the daily report of strength in men and animals which the adjutant will forward. There has been no expenditure of ammunition, and it is probable the gasoline and oil which will be consumed will be normal. The adjutant's report will include the statement: ammunition required, none; gasoline, ...

gallons; oil ..... gallons. At division the division Adjutant General will transmit, through G-4, to the Quartermaster, a copy of this information. Based on this information the Quartermaster will deliver supplies to the regiment.

After breakfast S-4 has a few minutes to contemplate his job for the day. He studies the route of march on the map; alternate routes around critical points such as bridges or defiles; also routes to the rear, particularly those to the Army ammunition depot from different points along the route of march where branching roads may offer a saving in distance. Knowing the rate of march the regiment will use, S-4 plans in advance the bounds for the train. He does not want the train to move up to less than a mile from the tail of the regiment at any time. From his map he first picks out desirable halting points for the train. He wishes to halt the train with open column distances between trucks at points where there is the most cover along the route; also if possible with the leading truck just short of crossroads or road forks leading to the rear. These offer a turnaround in the event of necessity. It goes without saying that there will not be any place on the route where all trucks can halt with open column distance and be under cover from overhead observation. But truck drivers are trained that upon halting they will move independently to the nearest overhead cover, and this detail is one which must not be overlooked. The trucks will spend a considerable time at each halt and it is essential they be and remain under cover. Based on the time the tail of the column will pass the most desirable halting points along the route, S-4 indicates to the transportation officer, on that officer's map, the points where the train will be halted and the time it will remain halted at each point before resuming the march to the next. As it stands, S-4, in the event he is called up or leaves the train for any reason, will know right where his train is all during the march, and will be able to put his finger on it at any time. He is using foresight and he governs his bounds so that he will never jam the tail of the regiment nor will his train be too far to the rear. S-4 varies his bounds between five and seven miles; thus he reduces the number of bounds; keeps his trucks under cover most of the time; and is never more than twenty minutes at normal marching rates in rear of the regiment. Having a radio in his command truck S-4 can move the train forward at increased speed at any time a message is received indicating this to be desirable.

Both columns of the regiment moved out on time followed by their trains one hour later. The march to the river line was without incident in either column. Prior to the last hourly halt before reaching the river the regimental commander sent a radio to S-4 directing that extra ammunition be issued to rifle troops during that halt. S-4 conducted the three ammunition trucks of the rifle troops forward personally, closing on the regiment just prior to its halting; trucks were reported to troops in the column and extra bandoleers were issued to all riflemen, who slung them over their shoulders. During this halt S-4 learned the plan of the regimental commander for disposition of the troops and the point where he wished the train held. Messages which had been received from the division reconnaissance squadron indicated that an enemy force would reach the river line in the late forenoon or early afternoon. Chances for ammunition expenditure by troops looked good. Shall S-4 send for replenishment of ammunition now; ask division to send forward a replenishment, or just wait and let the situation develop? As said before, S-4 is practical. If he waits and at any time in the future the troops need ammunition which he cannot give them, he will be waiting for assignment to some non-combatant job. Looking at the problem of the division quartermaster squadron with experienced eyes he knows the division is well to the rear; the division train probably still farther to the rear. To get ammunition up, trucks, will have to pass marching columns, and there is a good chance it would take longer than it would for him to send direct to the Army depot for it. The roads in rear of the regiment are clear of columns and his trucks can make good time; his truck drivers know the road now too. So S-4 decides that instead of getting a replenishment through the ordinary means of movement forward by the division train he would rather go get it with his own trucks in this instance. Accordingly he makes such a recommendation to the regimental commander, who responds, in effect, "Go to it."

In carrying out this order S-4 intends to bring forward all the ammunition he can; not just a replenishment of the rifle troop ammunition. He directs the three truck drivers to assemble their trucks under nearby cover, and the personnel riding on the trucks transfer the ammunition remaining on two of the trucks to one. The remainder of the loads on these two trucks can be dumped on the ground, partially loaded on the one truck, or transferred to their respective troop kitchen trucks on the road, or can wait for the kitchen trucks to come up. Another alternative is to send the loads of grain and equipment all the way back to the Army depot and back again, thus reducing the amount of ammunition which can be brought forward. That is the situation: When you need ammunition, you must manhandle, dump, or transport tons of supplies and equipment; which, in the writer's opinion could be avoided if we were provided with an ammunition train consisting of smaller trucks used for that purpose only. In this case S-4 transfers the supplies to the kitchen trucks of the two troops: at least all troops will still have their own.

The two trucks are dispatched to the Army ammunition depot with written requests for the amounts and kinds of ammunition desired: rifle, machine-gun (both calibers), and mortar. Truck drivers are given detailed instructions as to routes and speeds; provided with at least one map; directed that on the return trip they will march with not less than 500 yards between trucks; and

given a definite point to which to report—in this case S-4 designates a point on the road where a windmill and barn make an easy landmark which the drivers can see from where they now are. S-4 will see that either he or a guide will meet them at that point on their return.

The next job for S-4 is to get his train into the location designated by the regimental commander, and see that it is concealed. After that he must learn the dispositions of the troops and where the squadron and troop commanders are located. He must plan for the movement of kitchen trucks to mess locations for supper, and the receipt and issue of supplies tonight. There might be a fight which may make all plans go haywire. Okay! According to plan the troops will be disposed at dark with two rifle troops, one platoon of machine guns, and one platoon of caliber .50 guns along the river line, the remainder of the regiment (less the 1st squadron, reinforced) in reserve centrally located under cover. The regimental commander directs that the troops along the river will be messed after dark; those in reserve two hours before dark (5:00 PM); troops on the river to feed machine-gun and special weapons troop personnel in their respective sectors; ammunition trucks to be released to troops as soon as replenishment ammunition is received.

S-4 contacts the 2d squadron S-4 and informs him the time and place the two front-line troop kitchen trucks will be released to him to be conducted to troop mess locations. He advises him that he will handle the truck of the troop in reserve. He then returns to the trains and gives instructions to the mess sergeants to insure the preparation of meals at such time that when the trucks move forward the meal will be ready to serve. Machine-gun and special weapons troops are directed to turn over rations to the two front-line troops to feed their personnel along the river. When the two trucks previously sent after ammunition return, loads are retransferred and again troop trucks are loaded with their own supplies and ammunition. As soon as this is done S-4 gives the transportation officer instructions to conduct the ammunition trucks forward and turn them over to the squadron S-4 and machine-gun and special weapons troop commanders.

The next problem is the receipt and issue of supplies tonight. Selecting a point to the rear where he can divert supplies to the 1st squadron, S-4 sends a radio through command channels to division requesting that supplies be delivered to him at that point at 9:30 PM. He must assume his request will be complied with and proceed on that basis. The point S-4 selects is approximately ten miles to the rear, and he now sends a message to the 1st squadron directing that a convoy of five trucks report to that point at 9:30 PM to draw supplies. S-4 estimates that he can handle the supplies for his part of the regiment with nine trucks and he sends instructions to the troops that trucks will be returned to his control at 8:00 PM as follows:

Hq Tr	2 trucks
MG Tr	2 trucks
Sp W Tr	3 trucks
Reserve Tr	2 trucks

each truck to be accompanied by an enlisted detail of two men. By taking these trucks S-4 has left the trucks of the front-line (river line) troops with them; they will have a hard job feeding their men and animals and he gives them all the help he can. If the troops of the 1st squadron are similarly disposed the squadron S-4 can only leave one truck with each front-line troop. But that must be his problem. Because of the bulk of hay S-4 cannot move his supplies with fewer trucks, and even at that he may have to make a double trip with some of the trucks. The problem can be solved with fewer trucks when necessary, simply by doubling trips; the haul is not a long one. But so far as S-4 can visualize now this appears to be the soundest solution to him. Loads of all trucks will have to be dumped before they go to the rear, and the fewer number he can use over a long period of time the better: just that much quicker can they be reloaded with their normal loads and be ready to move if the situation requires.

S-4 can feel that he has laid his plans well so far as he can visualize the situation. Many things can and may happen to wreck these plans before night, but at least he has a start—he will be able to meet any necessary change with his agile cavalry mind.

★ ★ ★

***Time and opportunity may help to retrieve other misfortunes, but where forage and provisions have not been carefully provided, the evil is without remedy.*—VEGETIUS.**

Scout Car - Horse Portée Action in the Prompt Reduction of Road Blocks

By Captain Bruce Palmer, Jr., 6th Cavalry

THE following small unit scout car—horse portée action has to do with (1) Situations in which one, and not more than two, reinforced portée platoons are attached to a scout car troop operating in an assigned zone; and (2) Situations in which a scout car troop and a horse portée troop are operating in the same zone together. In the latter case, however, the Regimental Commander has attached a string to the horse troop, in that a limited number of reinforced portée platoons can be committed to action at one time by the subordinate commander.

2. Organization of Reinforced Portée Platoon.

The desired organization for the reinforced portée platoon in this type of action should be a small, maneuverable portée unit on the road, which can detruck and go into combat in the minimum time. One organization shown below, which can be completely transported in a total of five (5) trailers, has been very successfully employed by the Sixth Cavalry.

Trailer No. 1. Forward bay—three riding horses completely saddled and bridled; platoon leader's horse, platoon sergeant's horse, and an orderly-messenger's horse.

Rear bay—two pack horses with pack saddles on their backs; these two animals pack the two LMG's of the LMG squad. Hangers with side loads in place are hung on the sides of the trailer until horses are detrucked, when hangers are placed on pack saddles in a few seconds.

Trailer No. 2. Six riding horses for the six men of the LMG squad; these horses are completely saddled and bridled. LMG squad consists of 1 Corporal (also acts as a gunner), 1 gunner, 2 assistant gunners, and 2 drivers (drive two gun-pack horses).

Trailer No. 3. Six riding horses for the rifle squad composed of 1 Corporal and 5 riflemen; all horses are completely saddled and bridled.

Trailers No. 4 and No. 5. Same as Trailer No. 3.

This results in an organization of 1 platoon leader, 1 platoon sergeant, 1 orderly-messenger, 3 six-man rifle squads, and 1 six-man LMG squad, or a total of one officer, and 26 men. A total of 29 animals (27 riding and 2 pack horses) are carried in a total of 5 trailers.

At least one, and preferably two, motorcycles with sidecars, or bantams, should be assigned to the portée platoon; two solos for messenger and traffic control purposes should also be assigned. If not available from Service Troop, these vehicles should be assigned from the motorcycle (bantam) troop.

3. Position of Horse Platoon Leaders.

In Situation (1) above in which one portée platoon is attached to the scout car troop, the horse platoon leader should ride with the scout car troop commander in his command car, while the platoon sergeant marches the portée platoon in rear of the scout car troop headquarters. The platoon sergeant rides in a m/c with sidecar, or bantam; the second m/c with sidecar, or bantam, is for the use of the platoon leader.

In Situation (2) above, in which a scout car troop and a horse portée troop are operating in the same zone together, a horse platoon leader accompanies the scout car platoon leader of each advance scout car reconnais-

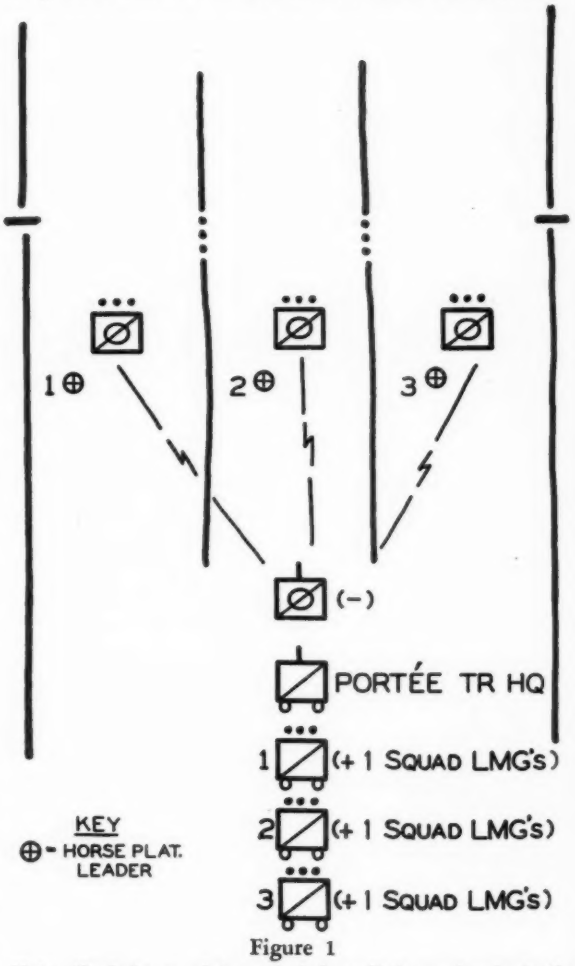
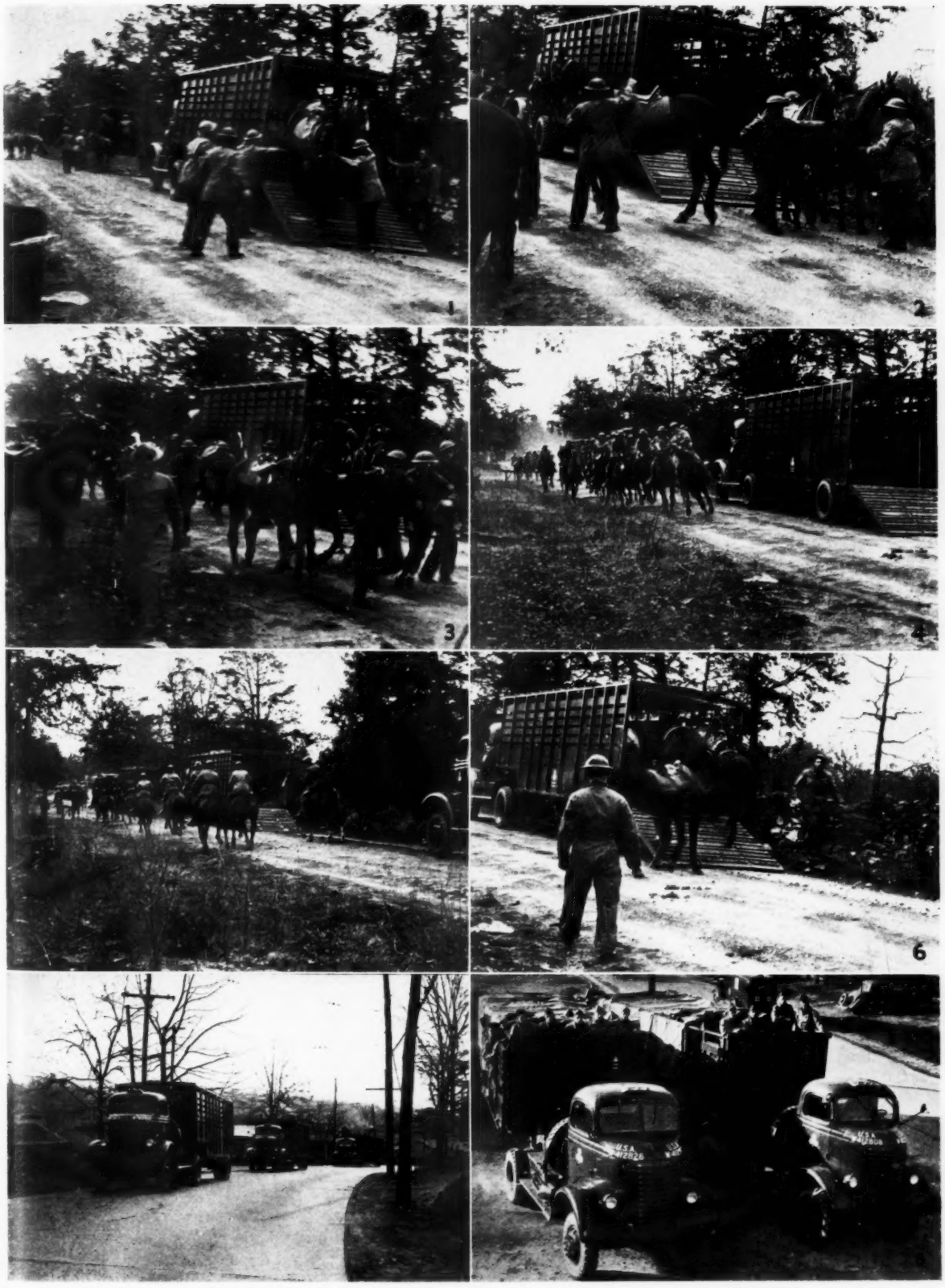


Figure 1

Note: Each horse platoon (reinforced) is used only in the scout car platoon zone in which its own platoon leader is operating. The Regimental C.O. specifies that not more than two horse platoons can be used at one time.



1—Horses (saddled and bridled) of a six-man rifle squad detrucking. Note handlebar of solo M/C in left foreground. 2—Same squad has finished detrucking. 3—Rifle squad assembling prior to moving out. 4—Rifle platoon (reinforced with LMG's) moving away from the trailers at a gallop. 5—Same platoon returning to trailers to load again. 6—Horses (saddled and bridled) of a rifle squad being loaded again. 7—Loaded trailers moving in convoy. 8—Two loaded portée squads. Note M/C with sidecar in rear.

sance patrol, usually two, or three, in number. The horse platoons of these forward platoon leaders march with the horse portée troop under the supervision of the respective platoon sergeants. These portée platoons are employed only with the forward scout car platoon with which their platoon leader is riding. (See Figure 1.)

4. Order of March.

a. Situation 1.

The order of march of the scout car troop's main body will be:

Advance Guard.
Scout Car Troop Headquarters (preceded by m/c section).
Portée Platoon.
Combat Trains.
Maintenance Section (scout car troop).
Rear Guard.

b. Situation 2.

In this case, the horse portée troop can march with the scout car troop's main body in the same relative position as occupied by the portée platoon above. The horse troop commander can accompany the scout car troop commander in his command car.

5. Security and March Outposts.

a. Reserve scout car platoon, or platoons, furnish march security, both advance and read guard. For necessary flank guards, scout car troop headquarters can use any available scout cars, bantams, or cycles.

b. At a halt, advance and rear guards automatically establish march outposts. The portée unit, troop or platoon, sends dismounted riflemen to either side of the column for flank security. Bantams from either scout car or horse troop can furnish additional flank security.

c. Distances between vehicles is usually 100 yards or more, in order to present poor targets to combat aviation.

6. Reconnaissance.

a. Situation 1.

The scout car platoon leaders of advance scout car patrols reconnoiter en route road, bridge, and underpass conditions as they affect trailers particularly, turnarounds for horse vans, good detrucking areas, and good overhead cover for trailers. When resistance is met, the scout car platoon leader, of course, reconnoiters for routes around the resistance within his zone, so that his platoon can continue its mission of reconnaissance. When the terrain is unfavorable, however, for example: the scout cars are held up at a stream crossing and there are no other bridges over the water obstacle, then the scout car platoon leader reconnoiters for routes usable by horses. When the decision is made to employ the portée platoon in a scout car platoon zone, the horse platoon leader immediately goes forward at high speed in his sidecar, or bantam, for his own personal reconnaissance. He should confer with the scout car platoon leader, determine what has already been reconnoitered, and plan his attack in coördination with the action of the scout cars.

b. Situation 2.

Reconnaissance, as it particularly affects the employment of the portée platoon, is conducted in the same manner as above, except that in this case, the horse platoon leader, being right with the advance scout car platoon leader, has the benefit of what reconnaissance has been completed prior to meeting resistance, and can complete his personal reconnaissance with the minimum loss of time.

7. Bringing Trailers Forward.

a. After the decision has been made to employ the portée platoon, a solo messenger is immediately dispatched to meet the convoy and guide the trailers to a previously reconnoitered detrucking area over a previously reconnoitered route.

b. The scout car troop commander should send the portée platoon being used forward under the protection of all, or part, of the reserve scout car platoon, or if the scout car reserve has been committed to action elsewhere, should convoy the trailers forward with troop headquarters scout cars. In any case, the portée platoon itself is led by the platoon sergeant who has accompanied it all along.

8. Unloading Operations.

a. The horses are unloaded under the supervision of the platoon sergeant. The detrucking is protected by scout cars, bantams, and cycles.

b. The platoon leader (horse) can either join his platoon at the detrucking point, or send a guide back by bantam or motorcycle, to the platoon sergeant who can bring the platoon up mounted.

c. The reinforced platoon described above can unload, mount, and move off at a gallop in 1 minute and 40 seconds. It can load in 1 minute flat. This is with the help of van drivers in lowering and raising into position the heavy tail gates of the trailers.

9. Disposition of Trailers.

If good overhead cover is available and the situation permits, the trailer can be left in the vicinity of the detrucking area; otherwise, they must be sent to the rear to rejoin the scout car troop headquarters, or the rest of the horse portée troop, as the case may be.

10. Communications.

The portée platoon is not provided with a radio, and so when detrucked, it depends on visual signals and messengers. In order to coördinate the attack of the horse platoon and the scout cars, the scout car leader must be on the alert to detect the noise of firing which marks the beginning of the horse platoon's attack. The scout car crews must then be ready to cease firing when the attack goes through.

11. Action of the Scout Cars.

Scout cars support the attack of the horse platoon

with the fire of their machine guns, either on the vehicles, or on the ground. During the last phase of the attack, the scout cars must be prepared to close in and assist the horse platoon in mopping up the last enemy resistance.

12. Supply of Ammunition to the Horse Platoon.

To resupply the horse platoon in action, scout cars and bantams can carry ammunition as far as possible toward the flank around which the horse platoon is operating. Men or horses carry the ammunition the rest of the way.

13. Illustration.

a. This simple tactical situation, illustrated by a schematic diagram (Figure 2), will serve to show the tactical functioning of a reconnaissance detachment composed of a scout car troop with a reinforced portée platoon attached (Situation 1 above), operating as a part of a Corps Cavalry Regiment moving on a mission of offensive reconnaissance. Attachments of antitank and P & D elements may, or may not, be made to this detachment according to the specific needs of the situation.

b. In this situation, the reconnaissance detachment has been assigned the following mission: To reconnoiter to the north between Route 1 and Route 3, both inclusive, with particular attention to the bridges at A, B, and C, and the high ground in the vicinity of G. The stream shown is unfordable.

The scout car troop commander assigned a scout car platoon, or section, to reconnoiter each route, holding the remainder of his troop and the portée platoon in reserve. The portée platoon leader accompanied the scout car troop commander in his command car. The portée platoon sergeant rode in a sidecar, or bantam, with the trailers; another sidecar, or bantam, was available for the horse platoon leader. Reserve scout cars furnished march security for the scout car troop headquarters, portée platoon, and trains which marched as a unit along Route 2 by bounds, ten minutes behind the advance scout car patrols.

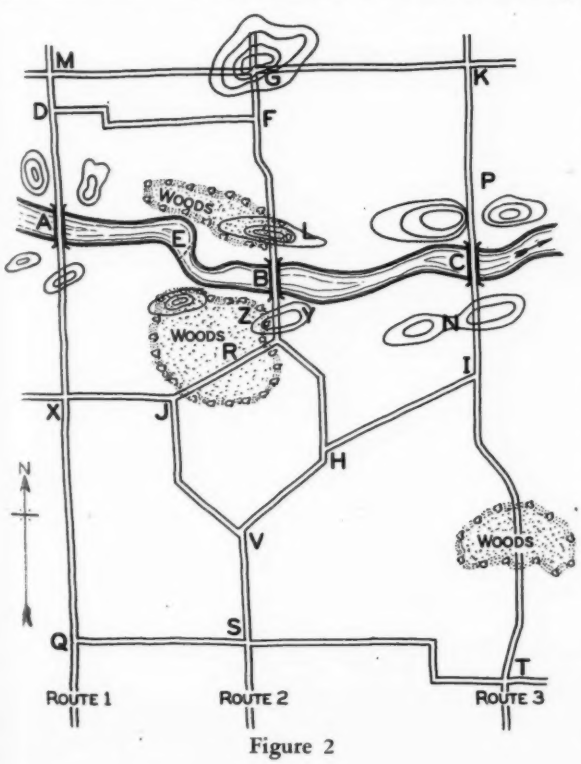


Figure 2

At Cross Roads S, the scout car troop commander learned from air reports that bridge A had been blown up and made unusable by the enemy, that bridges B and C are intact, and that small enemy motorized units are moving towards these two bridges. The scout car patrols are ordered to accelerate their pace towards the crossings, while the troop commander moves to Road Junction V, prepared to employ the portée platoon to secure the crossing, either at B or C.

The scout car platoon on Route 1 reports that it has reached bridge A and that the enemy has destroyed the center supports only, leaving the abutments of this concrete bridge undamaged. The platoon also reports a small enemy infantry detachment holding the far bank; and that it will keep this enemy under observation.

The platoon on Route 3 reports that it has arrived to find bridge C blown out and dropped into the river below. This was an old steel truss bridge and did not take much preparation or effort to demolish. The abutments, however, are still OK. This platoon reports that it is keeping the enemy, an armored car platoon, under observation on the far bank.

The platoon on Route 2 reports that it has arrived at bridge B, but that the enemy has blocked the bridge and is trying to blow it up. The platoon also reports that it has received antitank fire, but that it is bringing all possible fire to bear against the enemy to prevent the demolition of the bridge. Further, the platoon reports a good detrucking area and overhead cover for trailers near R; and that the best route forward is via Road Junction V and Road Junction J.

The troop commander decided to use the portée platoon to seize bridge B. The horse platoon leader in his sidecar, or bantam, immediately went forward at high speed to the scout cars to get the reconnaissance data already obtained by the scout car platoon leader. The troop commander then radioed back to the platoon at B that he was sending the reserve scout car platoon forward to support the fire attack on the bridge, and that he was convoying the trailers forward to the vicinity of R with the scout cars from troop headquarters. The scout car platoon leader immediately dispatched a solo motorcycle to meet the convoy and guide it to point R.

The horse platoon leader upon arriving at the scout car position, conferred with the scout car platoon leader as to the immediate situation and then began his personal reconnaissance of the area in search of a suitable crossing for his platoon. Meanwhile, the scout cars

were firing on the bridge from turret defilade in the vicinity of Y; dismounted machine guns in the woods near Z were also bringing fire on the bridge.

The horse platoon leader returned from his reconnaissance to R to find the platoon sergeant unloading the horses. The platoon leader conferred briefly with the scout car troop commander, stating that he wished to cross both rifle and LMG elements of his command in the vicinity of E and attack the enemy right flank and rear. The troop commander gave his OK and the horse platoon mounted-up and protected by a small covering force galloped off through the woods.

The troop commander then left his CP in the woods near R with the vans and went forward by motorcycle to Y. He instructed his executive to contact him through one of the forward platoon radios or by motorcycle messenger. Near Y, the troop commander informed the two scout car platoon leaders of the horse platoon's plan of attack and instructed them to cease firing when they heard the fire of the horse platoon, and prepare to rush the bridge when the attack went through.

Assuming that the attack was successful, the troop commander crossed the entire reconnaissance detachment over bridge B, loaded the portée platoon up again, and continued his mission of reconnaissance of the zone assigned and the high ground at G. Meanwhile the Regimental Commander had sent a detachment from the motorcycle (bantam) troop to hold bridge B, and for future use at bridges A and C as he then desired.

THE RADIO-SHOP TRUCK—6th Cavalry

—Photo courtesy Major J. H. Phillips, 6th Cavalry.

This truck has been so outfitted that there is a place provided for the repair of signal equipment, bins for the transportation of the allowances of signal supplies and space left for the charging of the batteries of radio equipped vehicles. The accompanying picture shows the details of the truck

The Selectee Slant!

By Privates Fred Riebe and Paul Guten, 11th Cavalry

OUR transition from civilian to a cavalryman of the Eleventh Cavalry Regiment is slowly drawing to a close. The end of a training period, which we entered as mere selectees and will be turned out as soldiers, well drilled in fundamentals of Cavalry drill and combat, is approaching. From then on down the stretch it will be up to us to make the grade.

From the moment we reported at the induction center in Milwaukee until we finally arrived at Camp Seeley, California, everything was more or less a nightmare. While at Camp Grant we remember only the endless lines and unending waits. The classifying of new men, the issuance of clothing, and the waiting around all day in the barracks surely wore on our nerves. However, now that we look back, it was the only efficient method of handling such a large body of men in such a short period.

When we did board the train for Camp Seeley, it is doubtful if any of us knew what lay ahead. Outside of knowing we were headed for the 11th Cavalry, our imaginative minds were creating fantastic pictures of life at camp. Most of us pictured our future home for the ensuing year as a replica of the famous Palm Springs summer resort, with everything from soup to pretty girls in bathing suits. Others, who had seen quite a few western pictures, came a bit closer on their imaginative forms of Camp Seeley. However, as to a definite idea, nobody was really positive. For most of us, our only previous connection with the Cavalry was in the rôle of a spectator at a Fourth of July parade.

The young man who had been bragging about belonging to the Cavalry unit of the Wisconsin National Guard was really the envied boy in our troop because of his previous experience. Our thoughts soon changed however, after the first time we saw him in the saddle. Some of the boys who had never been on a horse before did better than he.

After three days and two nights of the most nerve-wracking, monotonous train ride we had ever experienced, we finally arrived at our destination.

Our introduction to the 11th Cavalry and Camp Seeley was really a heartening and auspicious occasion. Five hundred and two young men stepped out of the train to be met by the martial strains of the Regimental Band and citizens of El Centro. From there we were transported to camp by truck. At the mess hall, we were treated to the most welcome coffee and doughnuts. And with the address of welcome by the commanding officer, Colonel Harold M. Rayner, we were ready to start basic training.

Pastern! Withers! Fetlock! Stifle! A million parts! So we thought the first day of our nomenclature of the horse. But in a surprisingly short time, we were speaking of a horse's physical make-up on equal terms with the Regulars, and with a full understanding of a Cavalryman's terminology of horses.

Along with the equitation instruction we soon became proficient in the use of the rifle, pistol and machine gun; knowing the nomenclature and being able to fire each with a marked amount of accuracy. Our main difficulty was not with the weapons or foot drill, or even the horses, but with the required formalities between enlisted men and officers. Extra duty soon clarified the situation for some of us!

Before we go further, we'll give a vote of thanks to the non-commissioned officers for their helpful information and assistance. Their friendliness smoothed out many of the bumps on the road to becoming a soldier. Before we were drafted we had heard of the aloofness of the officers—and we were greatly surprised to find it just another false rumor concerning the Army. It is true they demand a certain amount of respect but it is rightly theirs. Without these formalities many of us would take undue advantage of their leniency.

Since our induction into the armed forces we really have seen things happen from the ridiculous to the sublime. Men who, in civil life, were people of influence, and others who weren't as successful, trying to use their respective tactics of conquering the mysteries of the horse. The baker whose method of mixing flour and water didn't work so well on K.P.; the drapery salesman who has been draping from the cantle of the saddle for the last two months; the steward to a wealthy farm implement mogul trying to use the same manners on table waiting; all are now being molded into Army life. Today the very same men are beginning to function as a unit; each knowing his respective duties. The last seems to be the opinion of us recruits.

We certainly have had our adventures and thrills in our short period of two months in the Army, but we honestly and sincerely believe that the biggest thrill is in the transformation of ourselves into soldiers. Our old way of life and past environments have been forgotten for this one purpose.

Individualism of thought, opinions, and personalities have been dispensed with to form the smooth coordinated machine necessary to protect our homes and loved ones. One who has the type of home most of us come from prizes it as his most worthwhile possession. Parental love; sweethearts, livelihoods, have all been forsaken, although not forgotten.

Cavalry Medical Problems

By Lieutenant William G. Schmitz, Medical Corps

BELOW SEA LEVEL!

In the current expansion of the Army it is no novelty for troops to change station and find themselves in new, and, often, far less pleasing climates. For the 11th Cavalry, however, the recent shift from colorful Monterey peninsula, where climatic conditions were ideal, to the desert floor of a prehistoric ocean—and nearly a hundred feet below sea level—brought with it medical problems not usually found in such movements of troops.

Complications, in the form of mid-west selectees and remounts, have added to these problems.

The Surgeon

THE medical problems that confronted the 11th Cavalry upon its arrival at Seeley, California, last November were not unique; however, their solution may prove of value to another regiment if it were ordered to this vicinity.

Seeley, California, is located about 125 miles due east of San Diego, and about six miles north of the California-Mexican border. It is in below-sea-level country, the only source of water being from irrigation ditches. The original source is the Colorado River, and it is brought to this area by means of open canals and smaller, open ditches. As a result the water is grossly contaminated, especially with B. coli. Typhoid has occurred sporadically but there have been no epidemics in recent years because of the activity and supervision of the Imperial County Health Department. However, two problems immediately arose:

1. Camp water supply for men and horses.
2. Water supply while away from camp.

(1.) The camp water supply was solved by the constructing quartermaster, who installed the following system:

An eight-inch cement intake pipe was placed in the side of an irrigation ditch, and the water passed by gravity into a settling tank. This consisted of a thirty by fifteen foot cement lined tank, ten feet deep, covered with a board roof and screened on the sides. A series of baffle plates, similar to those used in a grease trap, were installed to purify the water by sedimentation. The water was allowed to settle in this tank for an average of sixteen hours, and was then siphoned from the tank and pumped under pressure through a filter composed of three feet of sand and gravel. The water was then chlorinated by adding a stock solution of H.T.H. (70%), by means of a pump. Experimentally, it was determined that if a concentration of two parts per million of chlorine resulted from the mixture, that the water was safe. This amount would leave a residual, in the distribution system, of 1/10 of 1 part per million, of chlorine. This concentration is not noticeable either by smell or taste.

(2.) Water supply on a maneuver: After several experiments by the Regimental Veterinarian, it was determined that on a march, in hot weather, the average need per horse per day may reach twenty gallons. The need per man per day for cooking, washing and drinking has been estimated as five gallons. It is easily seen, that a large amount of water would be needed daily for a squadron operating alone or reinforced. As long as we are near the irrigation ditches, there would be no trouble, as the Lyster bags could be used for the chlorination of water. As animal gastro-intestinal disease rarely occurs due to contaminated water, it would not be necessary to chlorinate their supply.

However, on a maneuver or operation south of this area, the irrigation system is soon left behind, and the country has no available water. Seven hundred and fifty gallon water trucks may have to be requisitioned in sufficient quantity, so that by making an average of three trips each to an available source, the daily water supply could be maintained.

The water in this area is of the type commonly called "alkali water." It is a hard water, difficult to make a lather with ordinary soap; but, its principal characteristic is that it causes dysentery. Our experience, both with the regular soldiers and selectees, has been that about thirty per cent of the men will be affected. Of this group, all, except one per cent, will recover in a short while and never be bothered again. The small remaining number never develop a tolerance and will have attacks every time they drink the water. The onset of the diarrhea is roughly three to ten days after the men have started using the water.

We have definite proof that the diarrheas are not due to local unsanitary conditions, to fly contamination, etc., as dependents living eight to ten miles away experienced the same conditions. A striking example of this was an enlisted man's wife, who drank bottled water for three months. She stopped using it due to the expense and a week after using local water, came down with an attack of diarrhea.

Weather:

On the desert, the winter months are deceptive. During the day, it will be warm and sunny, similar to the late spring weather in the middlewest. However, it is not unusual for a forty to fifty degrees drop in temperature to occur before seven p.m. This change necessitates close surveillance of the troops to prevent upper respiratory infections. Woolen clothes should be worn during the winter months, and the men should

be cautioned to wear jackets or mackinaws after retreat.

The average summer temperature ranges between one hundred and ten to one hundred and twenty degrees in the shade. Plans have been made to insulate our pyramidal tents. The model constructed consists of a burlap fly, strung on baling wire, which parallels all sides of the tent and is hung about eight inches away from the tent proper. This provides an air space between the burlap and the canvas, which we hope will act as an insulator, to reduce the inside temperature of the tent.

Salt Ration: Experience during the past few years has shown the value of supplementing the salt (Sodium Chloride) intake during hot weather, especially when associated with strenuous work. Heat exhaustion was prevalent in this vicinity among the utility workers until they took additional salt. After consultation with the local and state health authorities it was decided that during hot weather an additional six grams of salt would be needed. A problem arose as to how we would issue the salt. The tablets (ten grain) were out of the question, as we have no funds available for such an item, and the troops did not want to purchase them out of their mess funds.

The following scheme has been found to be practical. It has been tried on a few soldiers; but has not been instituted in the regiment at this time. A Lyster bag is set up outside of each mess hall and a noncommissioned officer distributes bulk salt. He pours one-half teaspoonful (two grams) of salt in the soldier's tablespoon. The soldier puts the salt in his mouth and washes it down with water from the bag. Occasionally a man will become nausiated; but this is so rare that it does not affect the method. The following graduated scale will be used: With a temperature of ninety degrees, one-half teaspoonful after breakfast and supper; over ninety-five degrees, one-half teaspoonful after each meal. It has been noticed among the small number of men taking salt, that afternoon fatigue, general malaise and muscular cramps have disappeared. We believe that the general morale of the command will be elevated and fatigue lessened when the salt ration is issued to the troops. The excessive heat should not prove to be a problem to this regiment.

It should be borne in mind that the use of a salt ration is not only indicated during hot weather; but, also during any exercise or maneuver that causes excessive perspiring among the troops.

The ideas mentioned in this article are not claimed to be original; but, are presented with the idea of helping over the rough spots, any troops that may be sent into this particular area.

The Veterinarian

Whenever young horses are moved into a new environment, a certain amount of disease conditions must be expected. The amount and severity of the various infections will vary with their condition prior to shipment, the length of shipment, and with their care and reception after arrival at their new station.

Due to emergency conditions existing in the remount service at the present time, the length of the processing period at remount depots has been reduced from a normal period of 120 days to only 60 days. The former period was ordinarily adequate to allow for recuperation from "childhood" diseases such as strangles and respiratory conditions incident to shipment of green animals from farms and ranches to animal concentration points.

Many of the remounts received at the remount depot will ordinarily suffer from Rhinitis, Influenza, and a considerable percentage with Pneumonia, but would be shipped very shortly after recovery, due to crowded conditions existing at the remount depots. In normal times, such animals are given the advantage of a long recuperative period to come back to their normal strength and health. These cases will invariably arrive in good flesh and apparent excellent health. After detraining, they appear to be in excellent spirits and this attitude gives rise to the temptation to begin their training period immediately in order to be able to turn them to troop duty in the least possible time. This procedure should be avoided for all remounts. Such animals, if brought into their work too rapidly, may be expected to be adversely affected, particularly with reference to their heart and lungs. Those that haven't been sick are liable to become infected after arrival at the new camp. It is a well known fact that animals shipped long distances have become debilitated by fatigue and exposure, even though the "28-Hour Law" concerning periodic feed and rest en route has been complied with.

Numerous cases of Rhinitis and some Pneumonia are not infrequently diagnosed by the Veterinary Officer even before the animals have been unloaded. The well known "Shipping Fever" is an all-inclusive term referring to Influenza, Strangles (Distemper) Rhinitis, Pneumonia and the complications which accompany them. The exciting causes of these diseases are organisms of various types, but the predisposing causes are long railroad journeys, excitement, irregular feeding and watering and exposure, all of which lower the natural resistance. The animals which do not show any symptoms of disease may, nevertheless, be contacts and may be going through the incubation period of some contagious disease. For this reason Army Regulations provide for an absolute quarantine of a minimum period of 21 days so as to protect the other animals of the command from any communicable disease. This 21-day period is not an arbitrary figure because the appearance of a new case of contagious disease automatically extends the length of the quarantine. These facts bring out another important point: In the construction of new camps for horse outfits, provision must be made by the Constructing Quartermaster and the Commanding Officer to foresee the need for expansion. If a large number of remounts are needed to bring the command to the

required strength, provision must be made for an adequate quarantine area. Furthermore, if several shipments of remounts must be sent at rather close intervals of time, additional quarantine corrals should be constructed. Otherwise the training program of the original units will be disrupted if the formation of new troops is delayed because of lack of stable areas.

Upon detraining of remounts and installation in their new corrals, it should again be remembered that these animals are very tired, even if they do not appear to be. Accordingly, their first day's exercise should be confined to munching large amounts of hay, but no grain. The writer believes that about 20 pounds of hay per animal for the first 24-hour period at judicious intervals will help to quiet these young horses and accustom them to their new surroundings. It will be best to keep them on a heavy hay and a very light grain diet for the first few days because they are too tired to assimilate concentrates without danger of severe digestive upsets.

It cannot be over-emphasized that the proper care of remounts their first few days at the new station will greatly influence their training and lessen the incidence of severe respiratory disease. Training programs to the contrary notwithstanding, it is my belief that these animals should not be ridden at all during the first week, but should be lightly exercised by leading and later by use of the longe. It should be remembered that a young green horse cannot be expected to stand the rigors of training and campaigning as well as an older troop horse and that careful conditioning and training during the early weeks after their arrival will pay dividends later.

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Feeding and Care of Horses

*By Colonel E. N. Hardy, Q.M.C.**

Excerpts from a letter:

In making trips to observe mounted units, I am particularly interested in the care and conditioning of animals, and I shall give you some of my observations in this respect: It is of course fundamental that horses must be in condition for Cavalry to function as such. Each individual animal must be conditioned, not the units in general. My observation has been that there is much to be desired in the way of expert feeding. Advantage is not taken of regulations to make changes or substitutions in the regular feeding. For example, hardly any of our mounted units feed corn during the cold months. It would be beneficial to have a part of the grain ration composed of corn during the cold months —up to about 45 per cent—depending upon how cold it gets. Corn is cheaper than oats and the difference could be applied to supplying more hay, of which I believe horses don't get enough. More care should be given to spreading the hay feeding out during the day rather than feeding most of it at one time. Every effort should be made to have at least one-third of the hay ration composed of alfalfa or clover. Good Johnson Grass hay should be fed at times so as to provide for a change. The kind of hay, in general, depends upon the locality—and good Johnson Grass hay is better than poor Timothy hay. I noticed in the maneuvers in Louisiana last spring that the horses were not eating their hay with any relish; much of it was being trampled under foot or left untouched. Some hay had been accepted which was below specifications. The commander of a unit has got to be more strict with inspectors of forage insisting that contractors live up to specifications.

Grazing

The subject of grazing in garrison or in the field is one which I think is neglected. Every possible effort should be made to give each animal at least 15 minutes grazing a day—this can usually be accomplished no matter what happens if the unit commanders are determined to accomplish it. There are many times when horses can be grazed at halts without any interference with the mission. These things seem to be fundamental, but it also seems to be true that they are not given the attention they should have.

Footing

In this day and time when we have to place our horses where they cannot be observed from the air, we can no longer place a continuous picket line on flat, open land. We have to tie horses individually in places where they will be covered from air observation. I noted in the maneuvers last year that in innumerable cases horses were tied on the sides of steep hills where they would have to exercise a definite effort to keep their balance. Of course, this strain to keep on their feet on the side of a hill interfered with their getting the rest and relaxation they were entitled to and which were necessary to enable them to carry on the next day. In nearly all such cases I noticed that by moving an animal, only a few feet, a more comfortable place could be found. You can imagine what a serious thing this might be if 400 out of 1,000 horses were tied during a night's bivouac in a place where they could not rest.

*Chief Remount Section, Quartermaster General's Office.

Making It Work

*By Lieutenant C. O. Brown, 11th Cavalry**

IN a period of rapid expansion, when demand far exceeds supply in almost every unit and branch, field forces have found themselves improvising ways, means, methods. In this the 11th Cavalry is no exception: in fact, it has employed "bailing wire and a piece of string" methods repeatedly during the past several months in an effort to meet training needs with inadequate supplies and shortages of equipment.

Two improvisations worthy of note are the hangers for the 81-mm. mortar pack, and the temporary installation of radios in the M3A1 Scout cars.

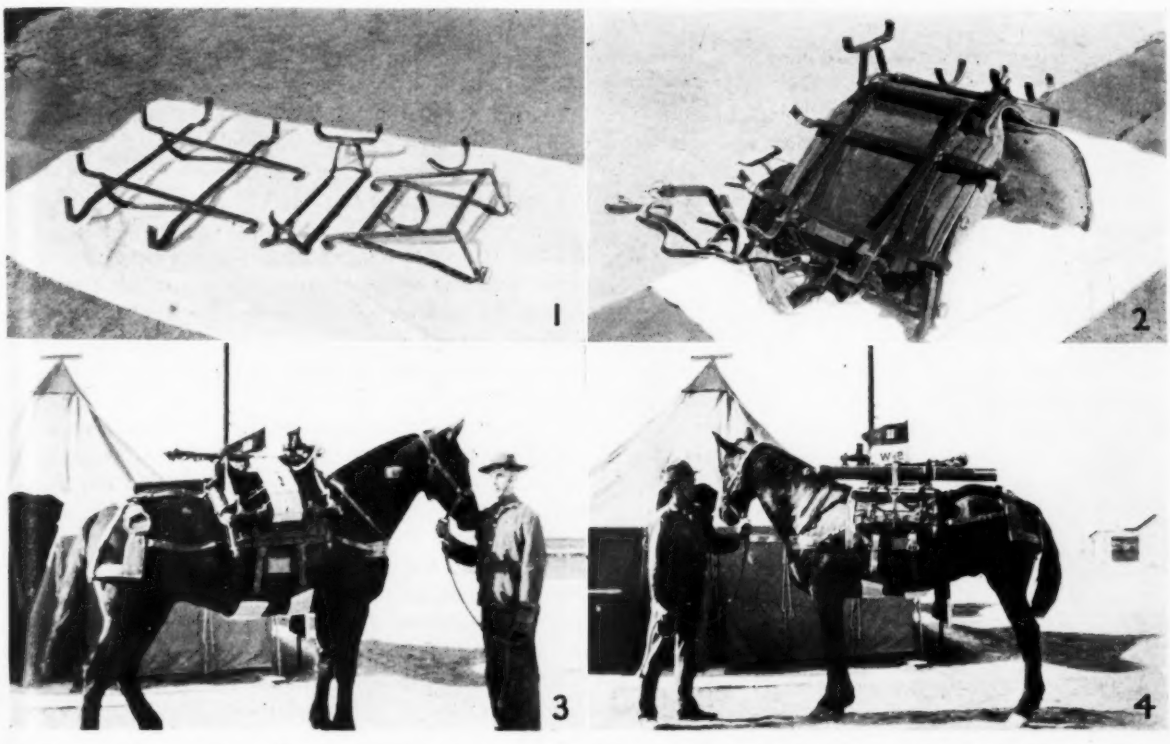
Improvised 81-mm. Mortar Hangers

The 11th Cavalry, stationed down in the rugged desert and mountain region along the Southern California border, has found that the day of improvisation is truly at hand; hence the below illustrated hangers for the 81-mm. mortar pack. Let it be understood that these hangers were not designed by experts, after long hours of study and experimentation. We didn't have the time or facilities for that; but when the 11th received the mortars and nothing to go with them, we had to do something about it and do it right away. The Regimental Commander, Colonel Harold M. Rayner, could not, and would not, wait for receipt of a set of the adopted hangers. The situation would not permit it.

Consequently, Lt. C. L. Yon, the writer, and the mortar platoon non-coms, put their heads together, and after a little tinkering and balancing, developed a model of what they needed to meet the emergency and proceed with training.

About that time we hit a snag in the project. We had a good idea but no funds—troop funds could not be used; but, on inquiry, we found that the Central Valley Union High School in El Centro had a well-equipped metal shop and was conducting a class in metalwork. The problem was presented to the school authorities and they gladly agreed to coöperate in every

*Assisted by Lieutenant Glenn C. Ames, 11th Cavalry.



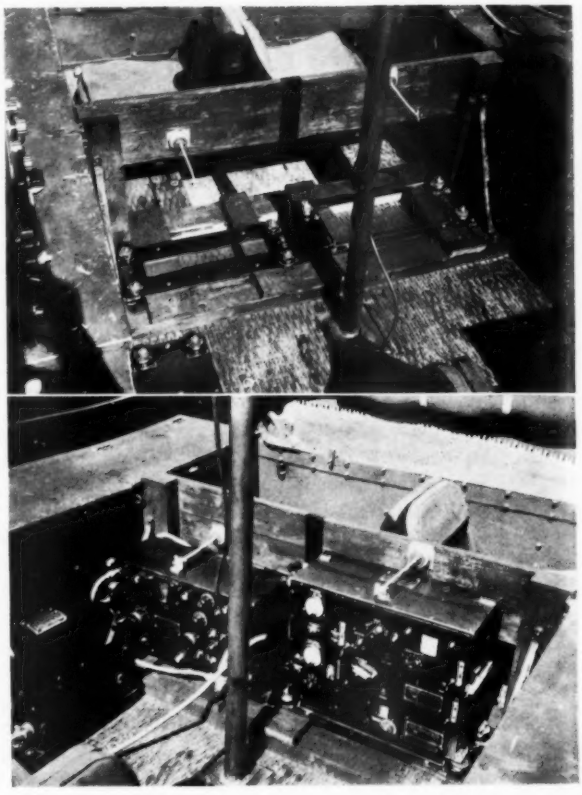
1—Hanger dismantled. 2—Hanger secured to the pack showing notched bipod cradle. 3—Off-side of pack showing mohair cincha over base-plate. 4—Near-side of pack showing single quick-release buckle.

way. The metal class agreed to construct the hangers for us if we would furnish them with the materials and a model of what we wanted. Corporal Palmer made a tin model of the hangers from an old five-gallon oil can, but the only suitable metal we could find was some quarter inch by one inch strap iron. This was heavier than we wanted but we found that by using it sparingly, it would serve very well. The model and materials were taken to the high school shop and the class of youngsters went to work with a good deal of enthusiasm and some skill, and produced two sets of the hangers in time for the demonstration on Army Day, April 7.

The hangers are so constructed that the center piece, carrying the bipod, is held firmly to the pack-saddle by the two side pieces carrying the mortar and the base plate. The fore-piece of the bipod cradle is notched to receive the bipod just forward of the compass joint and in rear of the ring, thus preventing the top load from slipping forward and backward and insuring identical weight distribution each time the gun is packed. Lacking any extra quick release buckles, a couple were salvaged from old packs. One buckle is used on each pack. A mohair cincha secures the gun to the pack, and a quick-release buckle is fastened to the near side, the cincha passing over the base plate center brace on the offside and over the bipod an the top load, which the leather latigo secures the mortar. Pieces of scrap leather are used to line the inside of the cradle to prevent rattling and reduce slippage. The total cost of non-issue materials per pack is approximately one dollar.

During Army Day demonstrations the packs were displayed showing how the crews went into and out of action from the mounted pack, being the center of interest for about eight thousand people who visited the camp on that day. The crews were a target of a thousand questions—the prize one being asked by a little old lady in more-or-less lavender and lace: "Doesn't it frighten the horse when you shoot that big thing from his back?"

About a week after Army Day, when we were training with the pack and rejoicing that our idea was really working out, the March-April issue of The Cavalry Journal reached us, and on Page 18 we found that the Cavalry Board was experimenting with a pack nearly identical to our own. We feel even better about the pack now since the Board has sanctioned through its pack, our general idea. In the meantime, pending the receipt of a set of adopted packs, we are progressing with training; can meet an emergency, and can adapt ourselves to the routine of the new pack with a minimum of effort and without serious delay.



Installation of Radios

By Lieutenant Glenn C. Ames, 11th Cavalry

In the last week of March, this year, the Regiment received a shipment of seven new M3A1 Scout Cars to replace the M-1's we had been using since 1935. The new cars were not, however, radio-equipped. Due to the necessary pressing need for radio-equipped reconnaissance units at this border station, the problem of improvised installation of the 245-H radios, which had been in the M-1 cars, immediately arose. Component parts and instructions for modification and installation of these radios into the M3A1 cars were duly requisitioned before work on the improvisation began.

Two considerations guided the construction: (1) Providing the radios with maximum safety from jar when the vehicles operate over rough terrain, and (2) Placing the radio in the vehicle in the most convenient position for operations without impeding access to the armament.

The 245-H radios were installed in the M3A1 scout cars by constructing a wooden framework and bolting thereto the mounts for the boxes BC-223 (transmitter) and BC-312 (receiver). In order to make room for the installation of this construction the two bucket seats immediately in rear of the mast were unbolted from the floor and removed, and the two pieces of 2 x 4 extending the width of the floor space thus vacated were bolted to the floor, using the holes that formerly contained the seat bolts. Cross members of 1 x 4 were screwed to the 2 x 4's and the mounts FT-162 and FT-173 were bolted to the cross members. As it was necessary to brace the boxes against forward and backward motion, a vertical framework was erected along the

rear 2 x 4 and braced at each end with an iron brace made from old horseshoes. To this rear frame were fastened the brackets used in the radio installation in the M-1 cars, thereby practically eliminating the fore and aft motion of the boxes. It was found that by placing the dynamotor unit PE-55 on the floor of the car immediately in front of the receiver and against the right side ammunition cabinet, it could be connected to the terminal box with no modification of the cord. In this manner, with the receiver on the right side (facing forward) and the transmitter on the left side, the whole set could be assembled with no modification of the cordage. It was decided that the boxes containing the spare tubes could be screwed to the back of the vertical framework at the rear of the set. The whole framework was then given two coats of OD paint.

It should be understood that this installation was not intended to be an improvement over the prescribed method, but instead was only a temporary measure taken with a view to making the radios available for use until a permanent installation could be made. This improvisation has worked out very well.

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STABLES, New Type

By Major Albert Whipple Morse, Jr., Cavalry

STABLES used by the Second Cavalry Division at Camp Funston, Fort Riley, Kansas, present an interesting study from the standpoint of *utility*.

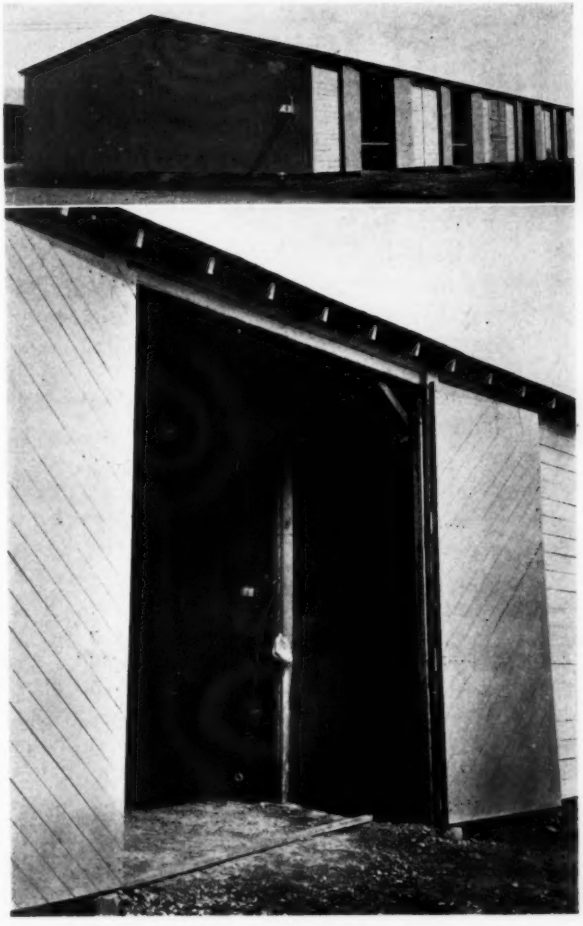
These stables can be converted quickly into motor sheds, and in that respect they are of particular value. By taking out the partitions, the buildings would be immediately available for motorized equipment.

There is no great depth to penetrate in cleaning these stables. Since the stalls are arranged along each side of the building cleaning consists of taking out what is on each side.

The possibility of a fire, against which every precaution is exercised, of course, brings out the consideration of removing the horses, and with these stables in use by the Second Cavalry Division, eight doors, ideally distributed, can be used, instead of the fewer number in the standard type of stable. Unlike the end doors used in most stables, which can be easily blocked by a fire at the ends of the building, the eight doors of this new stable can not all be shut off by a fire.

Undesirable features include the lack of ample ventilation in all kinds of weather, insufficient light, the absence of saddle rooms, and the increase in expense of construction because of the large number of heavily-built doors.

There has been no cold weather since these new stables were first occupied in March of this year, and by leaving the doors open the necessary ventilation and light has been obtained.



THE "PACK OUT!"

By Captains Loren B. Hillsinger and James E. Glattly, 14th Cavalry

ONE of the most obvious lessons learned from the present war is that the scope of Cavalry has been broadened to include an ability to maintain sustained combat, dismounted, with the horse temporarily absent —too far from the trooper to render the equipment on him available for immediate use, and yet close enough to bring the animal up in order to realize fully that precious mobility which spells success in modern warfare. This lesson is not entirely new, but it is new in the importance to which action of this type has advanced in consideration. This advance is not made to the exclusion of delaying actions, pursuit, harassment, reconnaissance, and other typical Cavalry rôles but in addition to those rôles.

To rise tactically to this demand is not a great task. But the fact remains clear that the present method of packing is not best suited for this new rôle. It was devised primarily for the former typical types of action before this new phase became so paramount. In other words we must look at this new problem and, as far as it is concerned, consider ourselves as mounted infantry in order to acquire the best angle of approach, bearing in mind constantly that it is in addition to our other old problems.

With this in mind, it first had to be determined what equipment was wanted; whether it was wanted on the horse or on the person, or on the truck; WHEN IT WAS WANTED IN THOSE PLACES; and a decision of how it was going to be placed and arranged in those places so as to:

(1) be *compact* on the truck
(2) be *accessible* to the man
(3) be *sparing* on the energy and body of the horse and man.

This involved study and experimentation.

First we had to "think-out" the situation outlined above. The result of this was to decide that the art of packing consisted of four essentials:

(1) to carry only the *indispensable*.
(2) to *distribute* its weight properly and equally so as to fatigue man and horse the least.
(3) to give the trooper the greatest possible facility in the use of his arms.
(4) to give the trooper those *items of equipment* essential not only to his contentment, but to his comfort and health as well.

In computing the list of indispensable equipment it must be remembered that a war time situation is visualized wherein worn-out clothing is replaced without lengthy requisitions and time-consuming procedure; wherein the old soldier will wash his clothes and the young soldier had better learn to do likewise in a hurry. To paraphrase Kipling, "he who travels fastest, travels *lightest*." We wanted to travel fast even at the risk of losing our reputation of a spit and polish outfit. That reputation would be willingly traded upon taking the field for one of speed. As Joe Bache, All American tackle of the Four Horseman Team, used to say in coaching his line after his graduation, "You've got to be fast—you've got to be fast, babies."

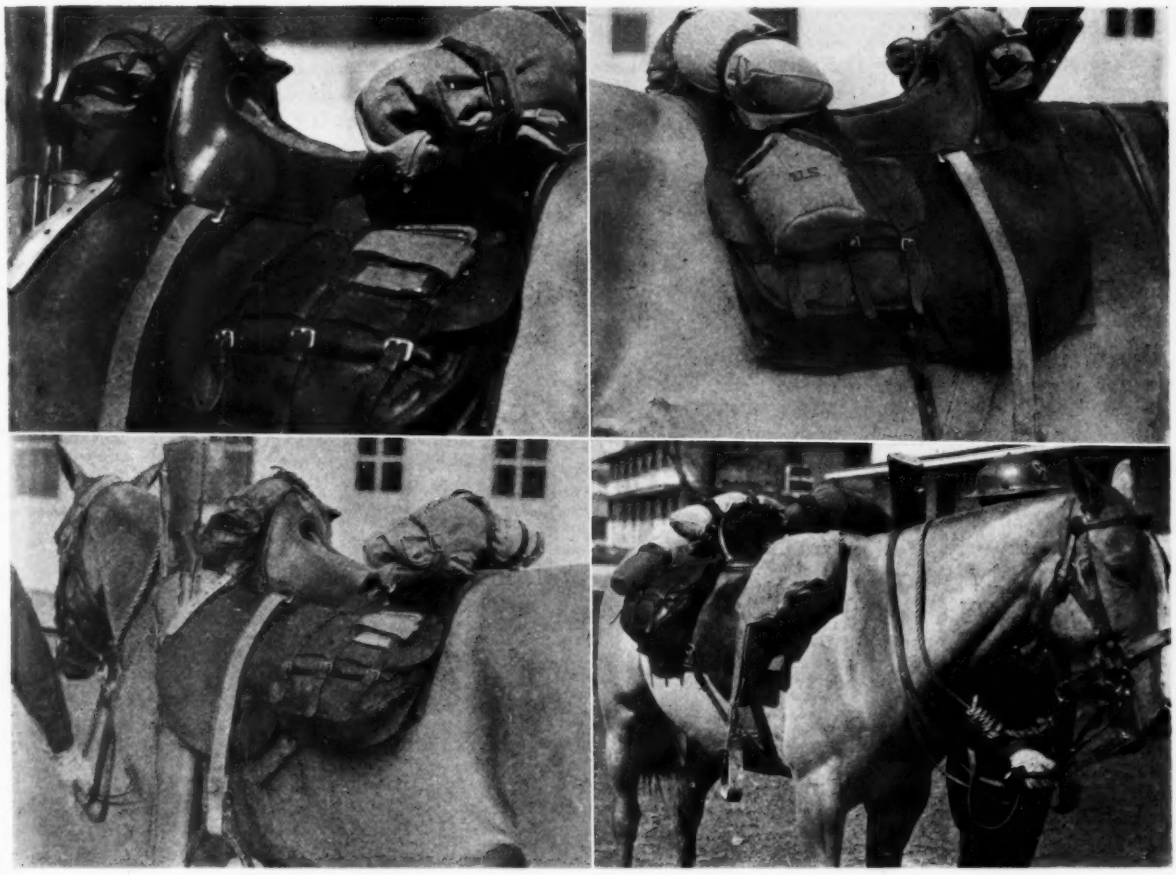
Equipment

First, consider the trooper's arms and associated equipment. He must have:

Rifle with boot
Pistol with clips
Cartridge belt with suspenders with pocket magazine
Hand grenades (still a moot question) (in dismounted canteen cover, as a suggested method of carrying).

Second, consider his personal needs. He demands:

2 shirts
2 breeches
6 pair socks
3 undershirts
3 drawers
1 raincoat
1 short coat (mackinaw)
1 windbreaker
1 undershirt, wool
2 pair boots (hobnailed with heavy soles(?))
1 belt, waist web
1 sewing kit
1 notebook (pocket size)
1 pencil
1 mess kit (complete, less knife and fork)
1 canteen and cup with cover (dismounted, converted for mounted use by sewing 2 web straps on rear)
tobacco
toilet paper
1 barrack bag
4 handkerchiefs
1 razor with blades or strap
shaving soap (cream mashes)
toilet soap
shaving brush
field ration "C"
1 face towel
1 bath towel
1 wrist watch
gas mask
comb
bolo with scabbard
toothbrush
1 helmet, steel
toothpowder (cream or paste mashes)
1 extra pair boot laces
foot powder
2 bed blankets
shelter half with pole, rope and pins
pocket knife (one blade of awl type, utility type)
first aid kit
identification tags
matches.



Above: Near and off sides, march pack. Below: Near and off sides, combat pack

Third, what horse equipment is essential? We decided upon the following:

saddle
bridle, snaffle bit only, curb available for exceptional horses from organization equipment
mohair cinch
saddle bags (pair)
2 canvas duck lining bags for saddle bags (1 only with lift-a-dot or buckle flap and fitted with web attachment and snap hooks to attach into rings of cartridge belt suspenders
feed bag
grain bag
surcingle
saddle blanket
curry comb
grooming brush
grooming cloth
saddle soap
sponge
16 horseshoe nails
halter with shank
6 coat straps
2 saddle bag straps
set of fitted horseshoes

Now what of the officers and the non-commissioned officers? Many long years ago General DeBrache of the French Cavalry laid down the rule that an officer should carry no more than a trooper. We went farther in that we eliminated some of the troopers' equipment and the substitutions we made did not meet the amount subtracted, much less surpass it. The actual saving in weight on both horse and truck amounts to some 25 pounds. We decided: (1) rifles would not be carried by officers, first sergeants, supply sergeants, mess sergeants, stable sergeants, buglers, machine gunners and assistant gunners, (2) the bolo would not be carried by officers or the first sergeants, however officers and non-commissioned officers of the first four grades would carry:

field glasses
compasses
(corporals of machine gun platoon also carry field glasses)
flashlight
whistles

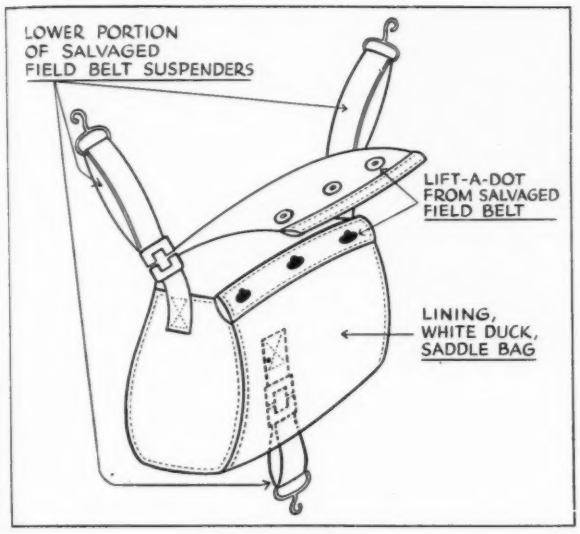
Packing

In our estimate of where to carry these items we followed a tip from the Regimental Commander, Lieutenant Colonel Pierce, and devised a kit bag from materials on hand. A sketch of this bag is included and it will be observed that it demands nothing except those things actually on hand. The time consumed to construct it is approximately ½ a man-hour. Actually the troop saddler can turn one out in 15 minutes, which will do the trick, but not have fancy edges and neatly trimmed seams. This bag was to contain those essentials

a man would need when leaving his horse for sustained dismounted action, including a day's ration of type "C." In order to do this we put the toilet articles in a face towel and put this in the mess kit. The knife and fork were left at home since the man has a pocket knife and a spoon represents the best utensil with which to eat the "C" type ration. Bath towels aren't being used when sustained combat is around the corner and, besides, needing the room, we didn't think a man would be interested in taking all of these mentioned items into a firefight. True, he might make the enemy a bit envious and lower his morale, but on the other hand he might make him so envious that he'd fight like the devil just to take them away from our men. Some enemies are just that rude and uncouth! However, swinging along the road when combat was not imminent, gave us another slant so we visualized a march pack for that purpose convertible into a combat pack, which would represent certain additions depending on the situation confronting us. Here is the way we lined up the march pack:

I. ON HORSE
- a. On pommel
  - 1 outer garment (can be either raincoat, mackinaw or windbreaker, but not more than one).
  - rifle with boot—attached near pommel ring
- b. Under saddle
  - saddle blanket
- c. On cantle
  - grain bag
  - feed bag
- d. Near saddle bag
  - grooming brush—in saddle bag pocket
  - horseshoe nails—rolled in surcingle
- e. Off saddle bag (see attached report on "ditty bag")
  - Mess kit—spoon only, no knife or fork
  - toilet articles—wrapped in face towel in mess kit
  - 1 pair socks
  - sewing kit
  - tobacco
- f. Attached to off saddle bag straps

Removing and attaching ditty bag to the field belt suspenders



Ditty Bag

This bag is designed to fit into the off side saddle bag. It contains the personal effects necessary for the trooper in order to function dismounted over a prolonged period. It also can be taken into barracks or a tent on an overnight halt. It is removable without disturbing the saddle bags on the saddle. It is slung over the shoulder when marching dismounted by hooking the attached straps on the bag into the swivel of the field belt suspenders. ESTIMATED TIME FOR CONVERSION OF LINING BAG WITH SALVAGED MATERIALS: *½ man-hour.*

canteen with cup and dismounted cover—2nd and 3rd saddle bag straps through loops of attached web straps

g. Attached to near saddle bag straps
curry comb

II. ON PERSON:

knife in pocket—on cord, end of which is tied or sewed to lining of pocket.
pistol and holster with pocket magazine on belt
first-aid kit on belt
bolo on belt opposite pistol
cartridge belt with suspenders
handkerchiefs (around neck—about pistol—in hat)
notebook and pencil in pocket
matches in pocket
toilet paper in hip pocket
wrist watch

III. ON TRUCK IN BARRACK BAG:

a. All remainder of equipment, including extra fitted barium-treated horseshoes.
b. Barrack bags would be waterproofed with a standard waterproofing solution and grouped into squad bags, constructed of canvas capable of holding the 8 squad barrack bags. They would be plainly lettered: (i.e.: Tr "F"
Plat 1
Squad 2)
c. Such squad sacks would be grouped and strapped by respective platoons.

The combat pack additions are issued when the commander "smells a rat" and decides he had better slip on his brass knuckles. Whereupon he consults the following list of optional additions, shuts his eyes, selects any or all items, and sends a message to the Brigade that "morale is excellent, men and animals in fine fettle." As they well should be, having been spared the maximum bother and expenditure of energy consistent with security. The additional list is as follows:

Field ration in off saddle bag
Extra ammunition in bandoleer about horse's neck
Steel helmet, worn on person
Gas mask (if situation and action warrants) on off pommel (see photo), otherwise on truck.
Hand grenades (in dismounted canteen cover—on cartridge belt) (may be carried without cover in shirt when dismounted—in near side saddle bag when mounted)

Final Remarks

We are now ready to go. Colloquially speaking, we may smell a bit when we get back, but every Cavalryman expects to smell a little bit. (Actually, as Mark Twain said, the verb is "stink"!) He can always make a remark about "pipe smoke, tweeds and horse sweat" and still steal the doughboy's girl. He may come back clothed in rags, but if he takes advantage of the potential mobility we have given him he'll be covered sufficiently with the "glory" that chaps like DeBrache, Forrest, and Stuart constantly sought and, strangely enough, got with just about half the equipment.

Oh, yes. There comes a time in every officer's career when he feels he is expected to make a few pertinent remarks. Sometimes because he feels he must fill in a lull, other times because he feels the troops have an idea he doesn't mean business with a capital "B." Some officers get it out of their system by haranguing The Cavalry Journal; others by delaying officers' call, or by boring the men to death with their yap. Anyhow, here are a few suggested items and topics—they have been adopted as standard procedure in the 14th Horse.

1. As a general rule an officer should carry no more than a trooper.

2. The often seen practice of having orderlies carry personal supplies of officers should be rigidly and positively forbidden.

3. All articles of necessity to the trooper have been listed. Inspection by an officer will be made prior to departure from any permanent, or semi-permanent, camp to see that no additonal items are carried. Frequent unexpected inspections should be made by officers at other times after packing out to make sure nothing has been acquired. Repeated offenders should be punished suitably to insure that such useless articles do not exhaust the strength of the horse. Squad leaders will be held responsible for persistent offenders.

4. Tongues of buckles on the pommel roll should point to the rear, except the center buckle which should point to the front.

5. Nothing on the pommel should rise above the pommel of the saddle.

6. After packing out and before mounting a trooper should always walk around the horse to inspect the load.

7. The modified Garand rifle boot was found to ride best when attached as follows: Carry the rifle as near the vertical as possible. Accomplish this by using a short front strap and lowering the rear strap approximately 6 inches toward the end of the boot. The end of this strap is then attached to the "D" ring of the cinch rather than to the near side cantle ring. This is preferable for 8 reasons:

a. Rifle rides with *less motion.*

b. Rifle less apt to *injure animal.*

c. Rifle impossible to *loosen or slide* from boot at fast gaits or down steep inclines. No possibility of loss.

d. Weight is suspended from a high point of saddle and results in little or no *leverage* components due to lack of moment arm.

e. Rifle may be *withdrawn when mounted* with no effort.

f. Position of rifle prohibits trooper riding with "feet on dashboard," thus riding the cantle. Results in trooper being *forced into proper forward regulation seat.*

g. There is no obstruction to left leg in application of leg aids.

h. By properly instructing men to raise rifle with both hands on stock it will slide from the boot easily. *Result is that much valuable time is saved.*

★ ★ ★

Mounting Trooper's Individual Equipment On Solo Motorcycle

*By Lieutenant Walter J. Davies, Cavalry**

WE, in the Sixth Reconnaissance Troop, believe we have reached a solution for the carrying of the trooper's field equipment on the solo motorcycle.

In our organization we have 12 Indian Model 640, solo motorcycles, which are used primarily by scouts and messengers in our reconnaissance work. Many times the motorcyclist is separated from his platoon for long periods of time making it impossible for him to carry his field equipment in a scout car. Without his field equipment he is stranded, if he should have a breakdown.

In our reconnaissance exercises and overnight problems, we find that it is essential that each trooper have his field equipment with him at all times.

Saddle bags, as issued, for the McClellan saddle have to be altered somewhat before they are of any use on a motorcycle. If they are mounted as issued they hang too close to the ground and interfere with the operations of the machine. If they are cut in two and bolted or riveted to the fender they offer disadvantages, namely: the leather tends to pull out at the rivets; there are no means to attach the trooper's roll and it requires emptying the contents of the bag if he has to leave his machine.

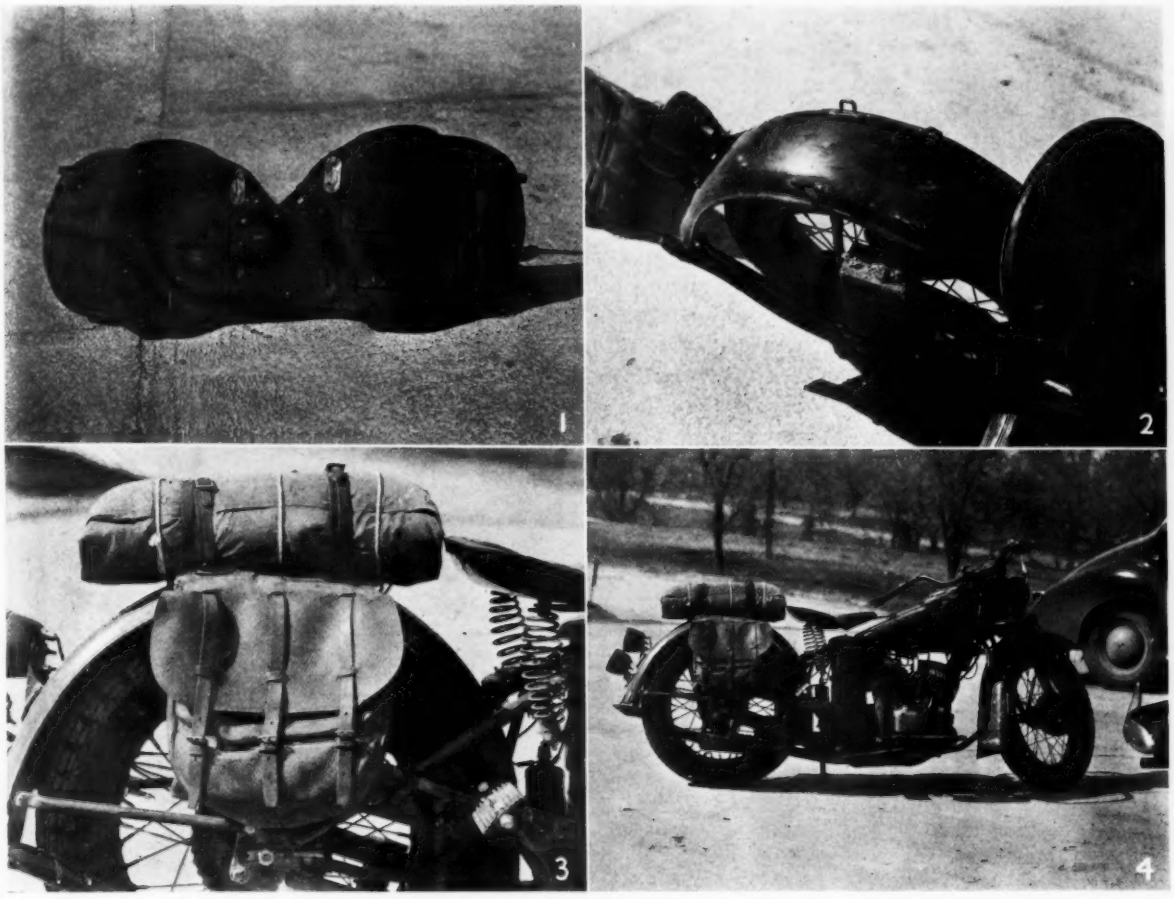
We alter the issue saddle bag and mount it, as shown in the photographs.

The saddle bags come stitched together in the center. By ripping out this seam and over-lapping the two pieces until the saddle bags proper are 9¾ inches apart when resewn, we can attach them to the rear fender of the motorcycle much in the same manner as they are attached to the McClellan saddle. Two slots are cut in the leather slightly above the top of each saddle bag and metallic plates are riveted over these as reinforcements.

Four D's are riveted on the rear fender in a position so as to align with the proper slots in the saddle bags.

Two 36-inch coat straps wrapped around the roll and through the D's secure both the roll and the bags to the machine. One short strap going through the ring at the bottom of the bag and around the frame of the machine keeps it from flopping.

*Motor officer, Sixth Reconnaissance Troop, Camp Funston, Kansas.



1—Saddle bag as altered. 2—Rear fender showing position of the D's. 3—Close up of the rear fender showing method of strapping the roll and bags to the machine. 4—Motorcycle with complete field equipment.

With this arrangement the trooper can carry his shelter half, raincoat, one wool blanket, one tent pole and five tent pins in his roll; his mess kit, flashlight, canteen, tools and dry rations in his saddle bags.

Advantages

The advantages of this method as compared to other methods of carrying the motorcyclist's equipment are:

1. The method of altering and installing the bags is simple and can be done by any 2d Echelon mechanic.
2. The trooper's entire field equipment is mounted securely on the rear fender, out of the way.
3. The weight in the saddle bags tends to balance them on the fender.
4. The bags hang high enough and ride smoothly —they neither bounce nor flap.
5. By loosening four buckles, the trooper can remove his entire field equipment from the machine.

This method has proved to be the most satisfactory arrangement of several we have tried and is recommended by the Cavalry Board.

★ ★ ★

"The Cavalry Board invites any individual, whether or not a cavalryman, to submit for consideration constructive suggestions or ideas relating to new equipment, improvement of standard equipment, or to any problem or project under study by the Board. The Board will also welcome suggestions as to new problems that may properly be considered. Communications should be addressed to the President, Cavalry Board, Fort Riley, Kansas."

NONCOM QUIZ*

EXPLANATION

With a view to stimulating the interest of enlisted men in our Journal we have inaugurated a new department — "Noncom Quiz." It is requested that unit commanders bring this feature especially to the attention of their men and inform us of any additional data desired.

1 1 1

THIS Quiz is to enable all "up and coming" noncommissioned officers to test their knowledge of the fundamentals in combat operations of small Cavalry units. The subject matter of each Quiz, appearing in this and subsequent issues of The CAVALRY JOURNAL, will deal with a separate phase of combat, such as Reconnaissance, Security, Attack, Defense, etc. Some will pertain to the Cavalry Regiment, Horse; others to the Cavalry Regiment, Horse and Mechanized.

The subject matter of this Quiz is SECURITY in the Cavalry Regiment, Horse.

After taking the test, check replies against the correct answers printed on the last page of the Quiz.

SECURITY QUIZ, NUMBER 1

1. *Question.*

Indicate what you consider to be the appropriate size rifle unit which would be used as an advance guard for each of the following; also indicate what you consider to be the normal attachments, if any, of Caliber .30 LMG's to the rifle unit which is being used as the advance guard:

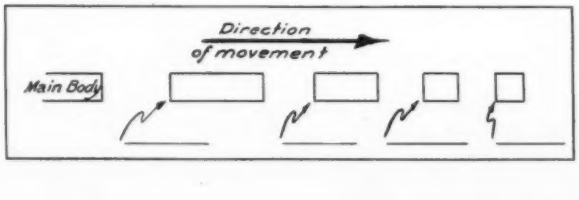
Answer.

	Size of Adv. Gd.	*Attachments Cal. .30 LMG's*
Squad		
Platoon		
Troop		
Squadron		

2. *Question.*

In the blank spaces below insert the names of each element of the security force indicated:

Answer.



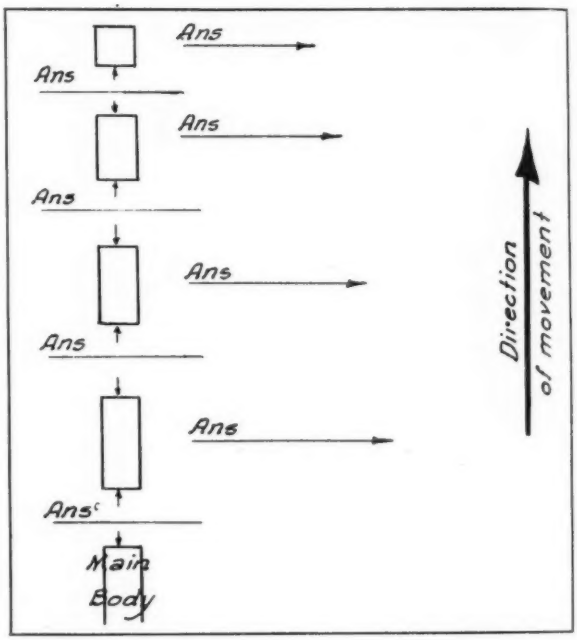
3. *Question.*

Assuming average conditions in the sketches below:

a. Fill in distance between elements.

b. Fill in distance to each flank for which each element is responsible for reconnaissance.

Answer.



4. *Question.*

You are the commander of a covering detachment of one squad for a troop which is moving from A to B on the sketch following.

a. Show on sketch the location of your covering detachment as it halts upon reaching successive bound lines. (Draw successive locations of the covering detachment on the sketch.)

b. Indicate on the sketch the width of front covered by your covering detachment when it is halted on the lines of its successive bounds. (Draw line to scale to indicate width and approximate location.)

c. Indicate the location of the troop commander when the covering detachment starts to move from its first bound line toward its second bound line. Use figure "1" to show location of troop commander.

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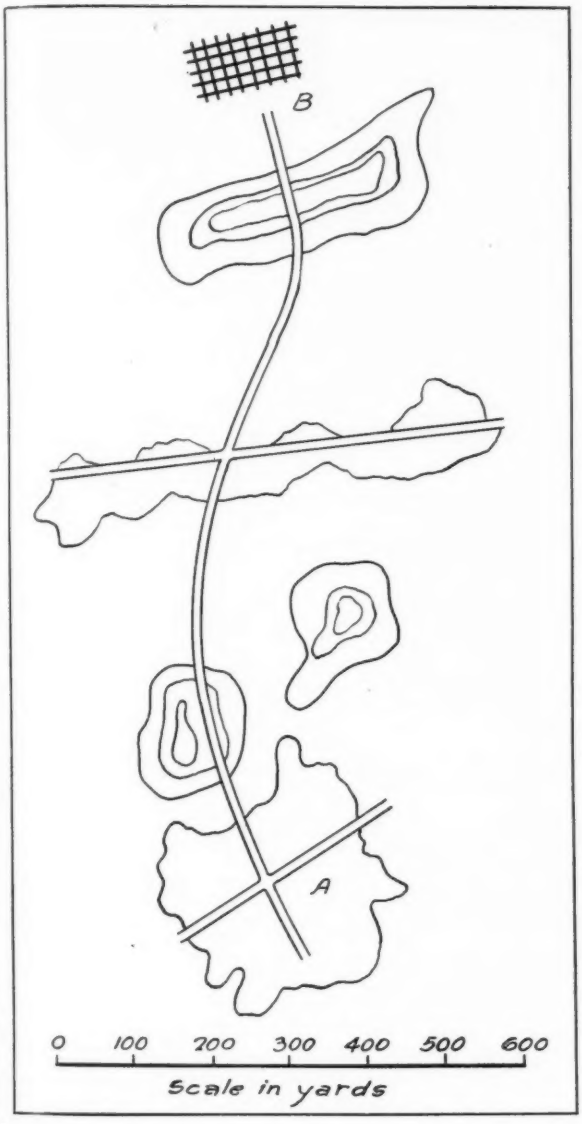
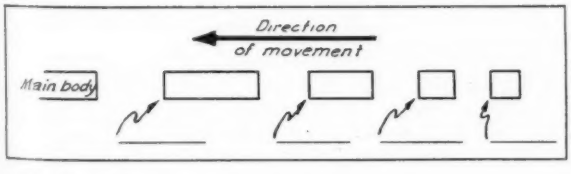
*Prepared under the direction of the Department of Tactics, The Cavalry School.



5. *Question.*

In the blank spaces below insert the names of each element of the security force indicated:

Answer.



6. *Question.*

As Platoon Sergeant you and your Platoon Leader accompanied the Troop Commander on a reconnaissance of a sector of responsibility for your troop in the outpost for the night of a regiment in bivouac. Indicate your knowledge of the correct security principles involved by choosing the correct words or statements, enclosed in brackets, which are applicable in the following sentences. *Cross* out *all incorrect* words or statements.

Answer.

a. The outpost line of resistance is a line encircling the bivouac areas beyond which the enemy must be held (until the main body can prepare for action) (until the supports can be organized into defensive areas).

b. The line of observation is a line forward of the outpost line of resistance along which are stationed (outposts) (outguards) charged with (observing and reporting any hostile advance) (advance patrolling).

c. Supports are the principal (holding) (reserve) elements of the outpost (and are employed to counterattack any hostile force which has penetrated the outpost position) (garrisoning the defensive areas on the outpost line of resistance).

d. Supports are numbered from (left to right) (right to left).

e. Outguards are numbered from (right to left) (left to right), (along the entire line of observation) (in each support).

f. Detached posts (are the sentinels posted by each outguard) (are observation and combat groups detailed at important points too remote to be included in the normal outpost organization).

g. A (combat outpost) (march outpost) (outpost for the night) is established for the security of a command which has halted temporarily.

h. Visiting patrols consisting of several (mounted) (dismounted) men are used (in daylight) (during the hours of darkness) for (liaison) (reconnaissance) between the elements of the outpost.

i. Outguards normally (occupy the same) (are changed to different) (positions at night as during the day) (positions at night from those occupied during the day).

7. *Question.*

Of the following, *underline* correct measures which may be employed by ground forces to secure protection against attack by hostile aircraft:

Answer.

Activity	Warning	Assembling
Chemicals	Pursuit	Concealment
Fire	Delay	Dispersion

8. *Question*

Of the following, *underline* correct measures which may be employed by a command to secure protection against attack by hostile mechanization:

Answer.

Antitank weapons	Mounted attacks
Demolitions	Antitank mines
Road blocks	Shallow entrenchments

Natural terrain barriers (Mountains, woods, swamp, etc.)

9. *Question.*

Of the following, *underline* the type of security detachment used by Cavalry at the halt, when it is intended to resume the march in the immediate future.

Answer.

Combat patrol	Combat outpost
Outpost for the night	March outpost

10. *Question.*

You are in command of one rifle squad acting as the point of a rifle troop which is the advance guard for a cavalry regiment marching in hostile territory.

a. As your point reaches A on the sketch below, it sees a small hostile patrol at B.

Which of the following courses of action do you adopt (underline *one*)?

Answer.

(1) Halt and await instructions from the advance party commander.

(2) Dismount to fight on foot.

(3) Attack mounted immediately.

(4) Immediately signal or report the presence of the hostile patrol to the advance party commander, continuing the march with the point.

b. What orders do you give to initiate the course of action you adopt in sub-paragraph *a*, above?

Answer.

_____

_____

c. Assume that as your point reaches A on the sketch below, it sees a small hostile patrol *at C instead of at B.*

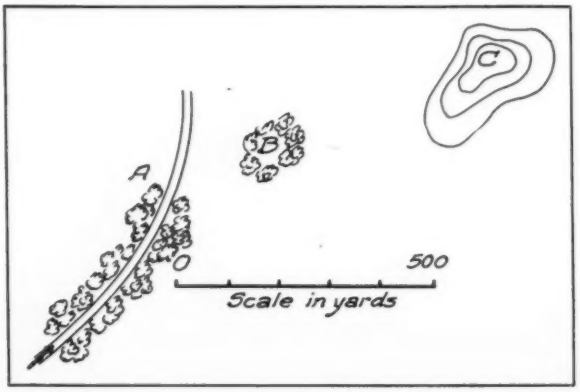
Which of the following courses of action do you adopt (underline *one*)?

(1) Halt and await instructions from the advance party commander.

(2) Dismount to fight on foot.

(3) Attack mounted immediately.

(4) Immediately signal or report the presence of the hostile patrol to the advance party commander, continuing the march with the point.



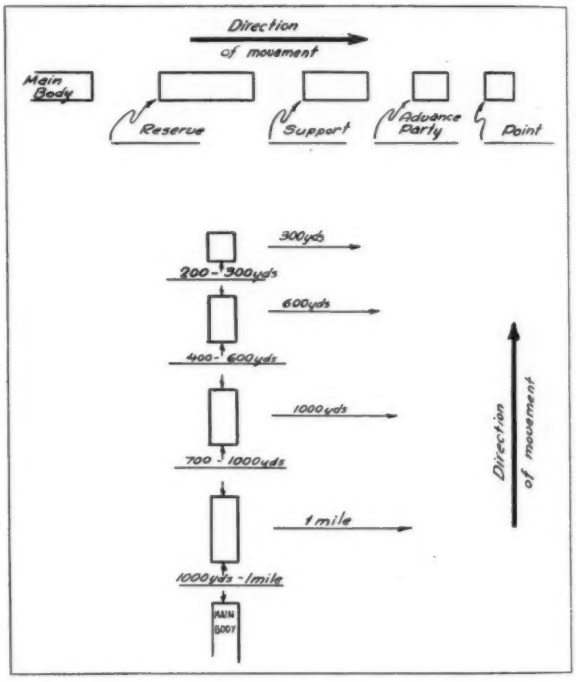
"NONCOM QUIZ"

Solutions to Questions

1.

	Size of Advance Guard	Attachments Cal. .30 LMG's
Squad	2 men	None
Platoon	½ squad	None
Troop	Squad	None
Squadron	Platoon	One squad

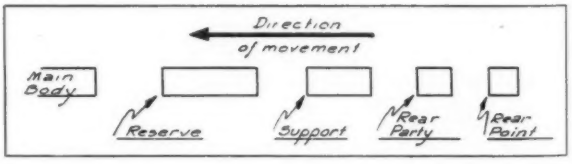
2.



3.

4. (Sketch on next page)

5.



6.

a. The outpost line of resistance is a line encircling the bivouac areas beyond which the enemy must be held (until the main body can prepare for action).

b. The line of observation is a line forward of the outpost line of resistance along which are stationed (outguards) charged with (observing and reporting any hostile advance).

c. Supports are the principal (holding) elements of the outpost (garrisoning the defensive areas on the outpost line of resistance).

d. Supports are numbered from (right to left).

e. Outguards are numbered from (right to left) (in each support).

f. Detached posts (are observation and combat groups detailed at important points too remote to be included in the normal outpost organization).

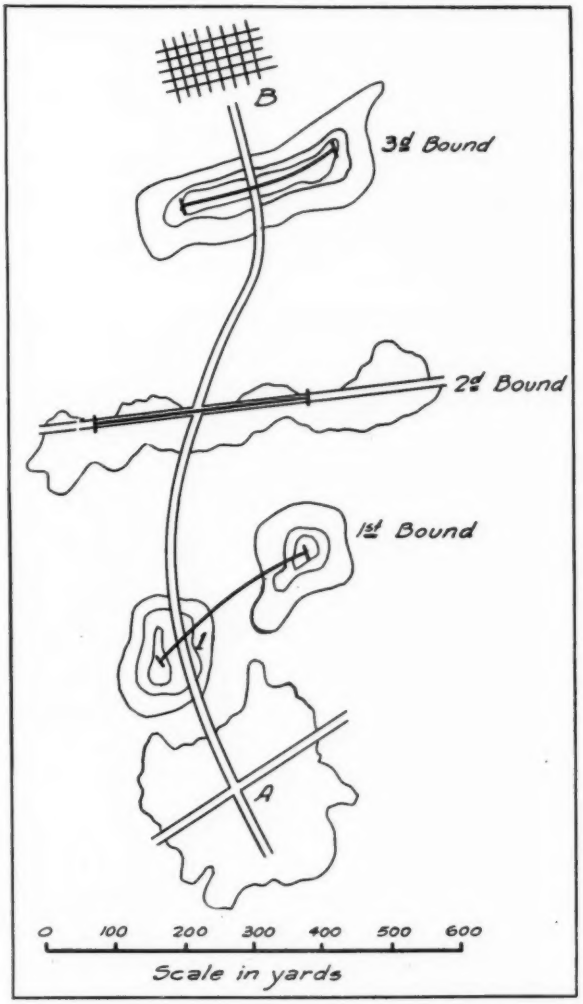
g. A (march outpost) is established for the security of a command which has halted temporarily.

h. Visiting patrols consisting of several (dismounted) men are used (during the hours of darkness) for (liaison) between the elements of the outpost.

i. Outguards normally (are changed to different positions at night from those occupied during the day).

7. *Warning* *Concealment*
   Fire *Dispersion*
8. *Antitank weapons* *Demolitions*
   Road blocks *Antitank mines*
   Natural terrain barriers
9. *March outpost*
10.
   a. *Attack mounted immediately.*
   b. As foragers—Pistol attack—Follow me.
   c. Immediately signal or report the presence of the hostile patrol to the advance party commander, continuing the march with the point.

4.



GERMAN HORSE CAVALRY

Artillery for the Fast Units*

By Brigadier General Giovanni Angelo Pivano

An excerpt from first page:

RELATIVELY little attention has been devoted, in recent publications, to major units of a type corresponding to our *divisione celere* (a special type of highly mobile division) as recently used in various theaters of operations.

The *Reiter Brigade* (Cavalry Brigade) later *Reiter-Division* (Cavalry Division) of the Germans was originally used, at the Polish front, to extend the radius of action of the Third Army, which was gradually advancing from East Prussia to a position east of Warsaw, in a series of cleaning-up movements.

On the Western Front, use was made of German cavalry divisions, at first, near the extreme northern end of the front, at the point where it reached the eastern extremity of the Zuider Zee, to clean up the weak reconnaissance forces stationed there by the enemy. Later they were employed for purposes of pursuit. Having first crossed the Seine River west of Paris, the cavalry reached and conquered Saumur, the seat of the French Cavalry School. In doing so it gave the German Army possession of two important river crossings (at Port Boulet across the Loire, and at Chinon across the Vienne). From there the cavalry troops pushed on to Parthenay, at the rate of 70 km. (44 miles) daily. This advance was carried out in a definitely southern direction, without stopping to rest, but not without fighting. At several points enemy resistance was met and broken down in quick, lively encounters. French armored contingents appearing every now and then were beaten back by the horse-drawn batteries and the motorized antitank groups included with the division.

Polish cavalry brigades were employed at both wings and in front of the individual army; and they drew back with their army, engaging in rear-guard encounters.

*Translated from *Rivista Di Artiglieria E Genio.*

From *Der Kriegsfilmbericht des Heeres*, Germany.

"In spite of the importance of armored forces and mechanization, the cavalry has again its definite missions or place on the modern battlefields." An interesting feature of this photograph is the appearance in the German cavalry troop of *machine gun pack horses*—long a characteristic of United States cavalry.

Mark I Tank Experiences in France*

By Section Sergeant-Major W. R. Armit

OUR Battalion was lucky enough to be stationed in France long enough to get to know the country and the people of the north of France.

For nearly nine months we spent some happy times in the vicinity of Arras, Lille and Lens and, of course, we did our share of trench digging in back areas.

The local people used to scoff at our efforts and assured us that their traditional enemies would not set foot in their country.

We did quite a lot of training with our Mark I tank, but all the time we needed a heavier weapon than the Vickers machine gun with which they were armed.

After many suggestions we at last had a point five gun fitted to the Troop leaders' tanks and, though this reduced the fire power of the Troops, it made the Troop leaders a bit more confident as to the outcome of any future engagements with enemy tanks.

The two-man tank was really a supreme test for the crew commanders, for in the restricted space one had to fire the gun, direct the tank, work the radio, and if one was a Troop leader one had to look to the tactical handling of the Troop.

However, in the eight months we spent in France we all worked hard, and we found that by practice we could do all the jobs and the tank had lots of room inside it.

Just before Hitler walked into Belgium we had shifted to a training area and were looking forward to lots of hard training and some pleasant hours in the nearby town of Vernon; the surrounding country was lovely and a change from the flat expanses we had been used to in the north.

The Battalion went up and we found ourselves on our way to Belgium. The road party had quite a hectic time on the move, but reached our appointed place without any mishaps.

The tanks came by rail and the unloading took place at a station called Athe, which, was only a few miles southwest of Brussels. We had our first taste of the power of the enemy air force, for in the middle of our unloading party, with the C Squadron still on the trucks, we had a visit from fifteen bombers.

They were flying at a height of about five hundred feet, and though all the small arms in the vicinity were brought to bear on them they carried out a raid on the railway bridge near the station.

Two of the flight came back to the station and just as we prepared to take cover they were both hit and crashed on the outskirts of the town.

We got off the train and moved our tanks up to a wood on the historic ground where the battle of Waterloo was fought. The route we followed was dive-bombed, but of the fifty-odd bombs dropped none exploded, still it was quite tricky work picking our way with tanks past the bombs, and each tank crew breathed more freely after they had left them behind.

That night saw the Battalion harbored in a wood so close to Jerry that no sleep was possible owing to the whistle of our own shells and the lighter variety of Jerry's.

We were troubled a lot by the passage of so many refugees through the wood, and guarding the tanks was quite a difficult job.

We settled down in the dark to get as much rest as possible but a hurried order to move spoiled this intention and with very little trouble we were on the move once more.

B Squadron were unlucky in the harbor as a plane was shot down and set fire to their petrol dump. We reached a fresh harbor just as dawn broke, and it says a lot for the intelligence work when we learned that our previous harbor had been heavily shelled as we got clear.

Our expectations of action were very high, but we were disappointed, for the order came that we had to move back. The Battalion Commander gave out his orders and it was a grave party. We were told that there was a strong possibility of our being surrounded, and we received instructions that we must be prepared to fight our way out and sell our lives as dearly as possible.

The road party moved off, followed by the tanks, but as we reached the station we learned that the Jerry air force had been there before us. There was nothing else to do but go on to the next station, but each time we found the stations a mass of flames. We came up against this difficulty all the way back to France, and so our tanks which were only meant to do short journeys by road had to march from Brussels to Arras interspaced with times when we had to retrace our steps to act in support rôles.

The air seemed to be filled with Jerry planes, and several times during the march they gave us special attention; our chief difficulty though was the refugees,

*From *The Tank*, London, England.

and it was only possible to move at night or when the roads were being machine-gunned.

We duly arrived back at the Lord Gort defense line between Tourney and Orchies, and had to take up positions in front of the block houses as mobile pill boxes. This work needed quite a high standard of coöperation between Troops owing to the wide area over which our tanks were dispersed.

We stuck to this work for two days while the Jerries were making progress towards Arras in their breakthrough. We then received orders to move once more in the direction of Arras, and it took us about twenty-four hours to reach Petite Vimy, arriving there at about 2300 hours (11:00 PM).

We refuelled and were led to a harbor by night just on the reverse slopes of Vimy Ridge. We spent most of the night covering over our track marks from the road to the harbor and also attending to the points necessary for an action.

The dawn brought a Jerry reconnaissance plane over, but our camouflage was good and we had no trouble from the air. This was fortunate, as the whole Battalion was parked in a small strip of wood with a distance of five yards between tanks.

The Squadron received orders about ten o'clock that they were to be the right flank of the Battalion in an attack to the southeast of Arras. My Troop was the extreme right flank of the Battalion, and I was detailed to keep in touch with another Battalion of tanks on our right.

Orders were given of the sketchy type, as we only had three maps in the Squadron, so we all had a look at the Squadron Commander's map and picked out various objects to help us on to the final objective.

We were timed to go into action at 1400 hours, so we started to move up at 1115 hours. We took the main road from Lens to Arras until we came to a right fork, which led up to the Vimy memorial and crossed the ridge in the direction of Mount St. Elloy through Neville St. Vast.

We then turned left and this brought us round to the south of Arras. We did not expect any heavy opposition, as there was not supposed to be any heavy guns up.

We had expected our infantry to start with us, but we did not see any and so kept going. I had not any time to put my Tank Commanders in the picture, so the obvious plan was to lead with my tank, and I gave orders that they would maintain a distance of approximately 75 yards on each side of me with my tank as the Troop center line.

Our advance was over very flat country with very little cover and the first indication of the enemy was given by fire from what appeared to be light field guns firing on fixed lines.

Several of these shells burst near my Troop, but I made up my mind that they had no observation on the tanks; this was proved by the fact that the bursts lifted up behind us.

I led my Troop up a slight ridge and we came in sight of a road along which were moving several German lorries filled with troops. The utter surprise on the faces of these troops soon turned to alarm when we got our machine guns going, and it was definitely first blood to us.

We crossed this road and then had to converge on a crossing of a railway. I led my Troop across and was fanning out when I received a signal from Major Fernie, who was in his tank on the same side of the railway.

I took my tank up close to him and he gave me fresh orders for a special task. He told me there was a battery of field guns in action about two thousand yards to the Battalion flank and they had hit the Commanding Officer's tank.

He ordered me to take my Troop over to them and destroy them or, at least, neutralize their fire. I signalled my two other tanks and told them the job on hand and off we went.

On the move to the gun position we struck a sunken road and my driver managed a crossing, but my other two tanks got stuck. I got in touch with the Squadron Commander and told him about the job I had to do, and asked for support to my tank.

The Squadron had become scattered by this time and were under Troop control, so he promised to support me himself. I advanced over the crest of a small ridge and ran smack into six antitank guns. They were not camouflaged and their only cover was the fold in the ground. My point five machine gun was brought into action and I got two of them before they realized I was on them—the range was approximately two hundred yards.

The other guns started on me now and one hit the gun housing. This caused the recoil slot pin of my gun to snap and shook the gun back in the turret, jamming me between the shoulder piece and the back of the turret and incidentally causing a cross-feed on my gun.

I forced the gun back and pressed the triggers of my two smoke mortars, but they did not fire. I found out afterwards they had been shot straight off. During this time, which was only the space of a minute, they hit my tank about ten times, but none of the hits did any real damage.

They were by now picking their shots to hit and one shot carried away a spoke of my track adjusting wheel. I quickly made up my mind that the best way out was to back over the crest until I could get my gun cleared, so I gave my driver the order and we slowly zig-zagged back a distance of about a hundred yards.

I had four generators in my tank spare, so the best plan was to light one and chuck it out the top with the hope that it would give us some measure of cover. I put this plan in action and, after lighting the generator, I found my turret flap had jammed.

It was quite a shock to have a smoke generator burning in the tank with the flap jammed, but after a few seconds' struggle I managed to get the flap open and chucked two out in front. It seemed hours before we regained the cover of the ridge, but all this must have happened in the space of eight to ten minutes.

I got my gun going again and, thirsting for revenge, I returned to the attack. They must have thought I was finished, for I caught the guns limbered up moving to another position, and revenge was sweet.

I had some anxious moments with the track adjusting wheel before I persuaded it to behave with the assistance of my "special" tool, i.e., the sledge hammer!

During this time I had lost touch with the rest of the Battalion, and had a discussion with my driver as to our immediate plans. The field guns supplied the answer, so I decided to collect my Troop before having a go at them.

It took me about ten minutes to join up with the remains of the Squadron, and I received orders to proceed with my task against the field guns, who were by this time getting quite near with their shells.

I collected two Mark I tanks and a Matilda with a two-pounder gun on it, and we had a conference in the cover of a railway bridge. The bulk of the Battalion tanks had gone on ahead, so I decided to cover the flank to prevent the Germans from coming straight down the road and getting in between our tanks and our infantry. I was in doubt as to the situation, as my radio set was out of action and the first couple of shots had carried away the aerial mast.

As we were in the middle of making up a plan an attack developed down the road with infantry and tanks, and though they were coming straight down the road their guns were pointing and firing to a flank away from us.

My gun had been pointing in the other direction, but I don't think I have ever moved my turret faster in all my life, and I got on to the first tank while it was still firing in the other direction. A belt of point fives stopped him and flames started to come out of this tank, the gun stopped firing, and the remains of the crew scuttled out.

The second tank was hit by the two-pounder from our Matilda, and it met the same fate as the first one. No more tanks returned down the road, and during the action, as the first couple of shots had carried away the infantry support.

This incident pointed out to me how dangerous the flank was, and I moved up to inform the Commanding Officer, whose tank was stationary about seven hundred yards away. I found when I got up to the C.O's tank that it was out of action, the side had been blown in, and saw that the C.O. and his gunner were both dead.

I confirmed this, but could not find the driver, so I returned to my composite Troop, and we had quite an exciting time waylaying the Jerry mechanized troops, who seemed to be unaware that the road was covered.

I kept up fire on the gun positions and eventually they ceased firing. Evening had arrived and at about six o'clock we came under the rally flag flown from the Adjutant's light tank.

We rallied in a hollow and after an hour we could only muster eight tanks and about six crews who had had their tanks knocked out. We put out our guard tanks and, as I had six bottles of rum, scrounged earlier in the day, I became quite popular!

A reconnaissance plane came over and so we had to move, as the Jerry shells got close. We moved up in support of infantry, the first I had seen all day, and managed to scrounge some petrol off them.

We spent the time waiting in dividing up the ammo (ammunition) which remained on the tanks and attending to repairs on the tanks. Then we received orders that we had to stand-by to counterattack a wood about eight hundred yards away.

During this period we tried to get information as to the position, but it was all very vague. The officer in charge was now Major Fernie and he left us to do reconnaissance—incidentally, that was the last we saw of him, for he was captured, escaped, swam the River Somme, and joined us in England.

It was getting dark and we heard the rumble of a heavy tank, which we took to be one of ours looking for us. Captain Cracroft approached it and put his map case over the driver's vision slit, it stopped, the door opened and out slipped a Jerry officer!

The surprise was mutual, and Captain Cracroft lost no time in joining his tank. They fired the heavy gun at him as he doubled back and it hit my tank, but he was able to regain the safety of his tank.

All hell broke loose then—several bright Very lights lit up the road, and they rushed another tank down supported by infantry fire, but the surprise was on our side and the fire power of our eight tanks soon had its effect.

The distance between us and the attacking party was only about one hundred and fifty yards, and all we could do in the dark was to choose the center of the bursts of tracers and fire down the lines they made.

We had two tanks armed with point fives and their bigger flash made them come in for a lot of attention. My tank was hit four times by their heavy guns, but it did not have too much effect.

About ten minutes of this battle, a German lorry caught fire and this blaze enabled us to see better, but, of course, it also showed us up, and as I was nearest it I ordered my driver to reverse slowly out of the light of this fire.

This encounter lasted about fifteen minutes and it stopped as suddenly as it started. Their infantry withdrew, leaving us in full possession and their tanks were put out of action.

None of our tanks had above a belt of ammo left, so Captain Cracroft ordered us to follow him back to our headquarters. This was a very tricky business, as we

The Officers' Guide

This new and up-to-date edition of an old standby answers virtually all questions an officer could possibly ask. The extensive revisions just made in this book cover all the recent changes in Army Regulations, the Selective Service Act, and the laws dealing with extended active duty for the National Guard and Officers' Reserve Corps. There are numerous illustrations and, of course, a complete index.

No other publication contains as much information useful to officers of all grades. Every young officer called to active duty should own a copy of this book. If you are anticipating a call to duty, get set for it and buy a copy of *The Officers' Guide*. A glance at the table of contents below shows the wide range of the subject matter covered by this ready reference work.

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had no maps and were not sure of our exact position, the situation wasn't clear, and judging by the numerous Very flashes we seemed to be surrounded.

We struck the road and this was a nerve-racking business, as each road block meant either friend or foe, and we could not be sure until close to them. We had to take to cross-country work once more, and it was only brilliant leading by Captain Cracroft that we finally managed to report to our headquarters on Vimy Ridge.

I shall never forget how when we were moving down a valley on to a road a column of French tanks passed. In the light we could not be sure of their nationality, and we held our breath, expecting every minute to receive a burst of fire, but they passed and left us to wend our way home.

During this march we were always in danger of being mistaken for German tanks trying a surprise attack, and it so happened that our headquarters did mistake us and let off a Bren gun. Luckily the mistake was rectified before any damage was done.

So ended a perfect day, but there was to be no sleep for us, for after taking cover in a wood on the slopes of Vimy Ridge we were ordered to another harbor, and as my driver was dog tired I had to sit on the front of the tank and slap his face to keep him awake.

Next day came a roll call and an inspection of the tanks. In all, my tank had been hit thirty-six times, but true to its name it had stood up to it. [The tank was named Dauntless and it lived up to the tradition, Dauntless by name and Dauntless by nature.] The Squadron Commander decided that it had to be condemned as unfit, so it went on the list as a pool tank for supplying spares.

It continued to move with the tank column and when the two Battalions were combined it joined them, and the crew commander brought it back nearly to Dunkirk. The moving over cobbled streets had its effect and the vibration split the turret down a line made by eight antitank shell hits!

* * *

The lessons I learned were mostly the ones my prewar Commanding Officer had drummed into me so often—always try to get as much advance information as possible and pass it on to your junior commanders.

Always be planning what one's action is going to be if so-and-so happens, in this way nothing is really a surprise—never work without support of at least one other tank.

Make it a habit to be proficient in all the arts of your trade, for in these days of good tank design, efficiency of the crew means a battle won—refuse to be dismayed, even if you know you are up against the much vaunted larger divisions.

Lastly, if one must die, then inflict as much damage to the enemy as possible before they write finis to you, and while there is life there is hope of getting out of a seemingly impossible situation.

National Guard Cavalry Regimental Histories*

101st Cavalry (New York). Organized as Troop B, December 16, 1895. [Federal military service. (Spanish War) May 20, 1898; redesignated Troop C, U. S. Vols.; served in Puerto Rico; mustered out November 25, 1898.] Resumed State status as Troop C; divided into Troops 5 and 6 and designated Squadron C, December 28, 1904; assigned to 1st Cavalry, December 27, 1911; former Squadron C detached from 1st Cavalry expanded into 5 troops and redesignated 2d Cavalry, May 11, 1912; additional units transferred from 1st Cavalry, November 5, 1913; 1st Cavalry disbanded and 2d Cavalry redesignated 1st Cavalry, December 10, 1913. [F–(Mexican border) June 18, 1916; stationed at McAllen, Texas; mustered out, March 13-24, 1917.] [F–(World War July 17, 1915; transferred to 102d Ammunition Train, 102d TM Battery, 104th and 106th MG Battalions, 27th Division, October 17, 1917; served with 27th and 33d Divisions in France and Belgium; mustered out, 102d TM Battery, February 4, 1919; other units April 2-3, 1919.] Reorganized as 1st Cavalry, New York Guard, in 1917; redesignated units 1st Cavalry, National Guard, 1919-1920-1921; redesignated 101st Cavalry, June 1, 1921.

Streamers authorized:

SPANISH WAR
- Puerto Rico

WORLD WAR
- Flanders
- Lorraine
- Somme Offensive
- Ypres-Lys
- Meuse-Argonne

102d Cavalry (New Jersey). Organized as 1st Squadron Cavalry, May 29, 1913, from existing and new units as follows: Troop A organized as "Essex Troop, June 3, 1890; redesignated Cavalry Company A, New Jersey National Guard, May 17, 1893; redesignated Troop 1, June 5, 1894; redesignated Troop A, May 29, 1913; Troop B, organized as Troop 2, April 24, 1895; redesignated Troop B, May 29, 1913; Troop C, organized by transfers from Troop A, May 29, 1913. Troop D, organized, August 27, 1914. [F–(Mexican border) June 21, 1916; stationed at Douglas, Arizona; mustered out, October 21, 1916.] [F–(World War) July 25, 1917; redesignated Hq. Troop, 104th Hq. and MP, Battery F, 112th Field Artillery, 29th (Blue and Gray) Division; served with 29th Division in France; mustered out, May 30-31, 1919.] Reorganized as 1st Squadron Cavalry, September 29, 1920; redesignated 1st Cavalry, March 1, 1921; redesignated 102d Cavalry, August 17, 1921.

Streamers authorized:

WORLD WAR
- Alsace
- Meuse-Argonne

104th Cavalry (Pennsylvania). Organized by consolidation of units of 8th Infantry and 1st Cavalry, June 1, 1921; reorganized without change in designation, April 1, 1929. 8th Infantry organized, June 30, 1874, from Indian units organized, 1834 and subsequently. [F–(Spanish War) May 11-12, 1898; redesignated 8th Pennsylvania Volunteer Infantry; stationed at Camp Alger, Virginia, Camp Meade, Pennsylvania, and Augusta, Georgia, where mustered out, May 7, 1899.] Reorganized as 8th Infantry, April 21-June 13, 1899. [F–(Mexican border) July 9, 1916; stationed at El Paso, Texas; mustered out February 27-March 4, 1917.] [F–(World War) July 15, 1917; redesignated with 16th Infantry, 112th Infantry, 28th (Keystone) Division, October 11, 1917; served in France with 28th Division, mustered out, May 6, 1919.] Reorganized as 8th Infantry, October 16, 1919. 1st Cavalry organized from existing and new units July 6, 1914 (see histories of units).

Streamers authorized:

SPANISH WAR
- Puerto Rico

WORLD WAR
- Champagne
- Champagne-Marne
- Aisne-Marne
- Oise-Aisne
- Lorraine
- Meuse-Argonne

106th Cavalry (Illinois-Michigan). Illinois component organized as units Cavalry Squadron, 1891-97. [F–(Spanish War) May 20-21, 1989; recruited to 12 troop regiment; redesignated 1st Illinois Volunteer Cavalry; stationed at Chickamauga, Georgia; mustered out, October 11, 1898.] Squadron resumed State status; redesignated 1st Cavalry, June 22, 1899. [F–(Mexican border) June 27, 1916; stationed at Brownsville, Texas; mustered out November 17, 1916.] Troops B, D, G assigned to 3d Field Artillery, June 24, 1917. [F–(World War) July 25, 1917; redesignated 124th Field Artillery, 33d Division, September 21, 1917; served in France and Army of Occupation in Luxembourg; mustered out, June 8, 1919.] Reorganization as 1st Cavalry begun in 1912; redesignated 2d Squadron, 106th Cavalry, December 13, 1921.

Michigan component organized as Troops A and B, 1st Cavalry, June 1, 1905 and January 29, 1908. [F–

*Official National Guard Register.

(Mexican border) July 8, 1916; stationed at El Paso, Texas; mustered out, March 23, 1917.] 1st Squadron, 1st Cavalry, organized, June 26, 1917. [F—(World War) July 15, 1917; redesignated 2d Battalion, 119th Field Artillery, 32d Division, September 17; served with 32d Division in France; mustered out, May 16, 1919.] Reorganized as 1st Separate Squadron, 1920-21; redesignated 1st Squadron, 106th Cavalry, July 1, 1921; 3d Squadron, organized April 10, 1929.

Streamers authorized:

WORLD WAR
- Aisne-Marne
- Oise-Aisne
- St. Mihiel
- Meuse-Argonne
- Alsace
- Lorraine
- Champagne

107th Cavalry (Ohio). Organized as 1st Squadron Cavalry, July 25, 1910, from Troops A and B organized in 1877 and 1902 respectively; Troops C and D organized in 1911. [F—(Mexican border) July 6, 1916; stationed at El Paso, Texas; mustered out, February 28, 1917.] Expanded to regiment and designated 1st Cavalry, April 16, 1917; redesignated units 2d and 3d Field Artillery, May 22d and July 7, 1917. [F—(World War) July 15, 1917; 2d and 3d Field Artillery redesignated 135th and 136th Field Artillery, 37th (Buckeye) Division, September 15, 1917, respectively; served in France; mustered out, April 10, 1919.] Reorganized as 1st Cavalry, 1919-20; redesignated 107th Cavalry, July 1, 1921.

Streamers authorized:

WORLD WAR
- Lorraine

112th Cavalry (Texas). Organized as 1st Cavalry in 1920 from existing Cavalry units of 3d, 5th, and 6th Cavalry, organized in 1918 for World War but not in Federal service; redesignated 112th Cavalry, July 20, 1921.

113th Cavalry (Iowa). Organized July 4, 1915, as 1st Squadron. [F—(Mexican border) July 19, 1916; stationed at Donna and Llano Grande, Texas; mustered out, February 28, 1917.] [F—(World War) July 15, 1917; Troop A redesignated Headquarters Troop, Troop B to 125th and 126th MG Battalions, Troop C to 133d Infantry, Troop D to 109th Ammunition Train —34th Division; served with 34th Division in France, not in combat; band to 301st Cavalry, served in U. S.; all mustered out, 1919.] Reorganized as 1st Cavalry, 1920-21; redesignated 113th Cavalry, November 1, 1921.

115th Cavalry (Wyoming). Organized as 1st Regiment in 1888; redesignated 1st Infantry in 1890. [F—(Spanish War and Philippine Insurrection) May 7-10, 1898; served in P. I., July 31, 1898-July 30, 1899; mustered out at San Francisco, California, September 30, 1899.] Reorganized as 2d Infantry; redesignated 3d Infantry in 1903; regimental organization abandoned and units divided into 1st and 2d Separate Battalions and Separate Company, April 29, 1915; Separate Company assigned to 2d Battalion, April 4, 1916, in place of company mustered out. [F—(Mexican border) 1st and 2d Separate Battalions, July 4, 1916; stationed at Deming, New Mexico; mustered out, March 9, 1917.] 1st and 2d Battalions consolidated and 3d Infantry reorganized, July 25, 1917. [F—(World War) 2d Separate Battalion, March 25, 1917; 3d Infantry less 2d Battalion, July 25, 1917; units transferred to 148th Field Artillery, 116th Ammunition Train, 146th MG Battalion, 41st Division, all of which served in France; only the 148th Field Artillery being in combat; mustered out in 1919.] Reorganized as 1st Cavalry in 1920; redesignated 115th Cavalry, May 1, 1922.

Streamers authorized:

SPANISH WAR
- Manila

PHILIPPINE INSURRECTION
- Manila
- Malolos
- Luzon

WORLD WAR
- Champagne-Marne
- Aisne-Marne
- St. Mihiel
- Meuse-Argonne
- Champagne

124th Cavalry (Texas). Organized, March 15, 1929, from existing Texas National Guard units.

The Cavalry Journal will carry full coverage of the 1941 Cavalry Maneuvers. It is requested that qualified staff officers be designated by unit commanders to prepare this material and that maps and photographs *suitable for publication* be included with contributions.

Unit Training Activities

Fourth Cavalry—Fort Meade, South Dakota

LIEUTENANT COLONEL JOHN B. COULTER, *Commanding*

The Fourth Cavalry, now at full strength, has been intensively engaged in all phases of training, working up to regimental combat training scheduled to commence about May 10th.

New arrivals at the post include Lieutenant Colonel Benners B. Vail, assigned as Post Executive Officer, Major Wesley W. Yale, assigned to command the horse squadron (Portée), and Major Raymond D. Palmer, assigned to command of the mechanized squadron.

An Advanced Tactics course for all officers of the regiment began last October and was concluded April 18th. These classes were conducted by Lieutenant Colonel John B. Coulter, regimental commander, and were held each Friday evening.

Command Post Exercises are being held twice weekly for the purpose of training in communications and staff procedure. In connection with these exercises, instruction in the use of cover, camouflage, antiaircraft and antimechanized measures is being given concurrently. Looking forward to maneuvers, a weekly school in umpiring has been conducted since April 18th by Lieutenant Colonel C. F. O'Keefe, regimental executive. This school has been attended by certain designated officers, but it is now planned that all officers of the regiment will attend the school.

The regimental intelligence school was conducted during the month of April for intelligence personel of Headquarters and Headquarters Troop, 1st and 2d squadrons, and the troop scouts. Instruction was divided about evenly between classroom and outdoor work.

At the present time the 1st Squadron is devoting itself to completion of range firing in all weapons, and to tactical drills in which control features of the squadron, troop and platoon are stressed. Valuable use of a loudspeaker sound truck is being made by the 1st Squadron in their drills. By this means instruction and control are greatly facilitated.

Anxiously awaiting the arrival of their "bantam" cars, the 2d Squadron is engaged in range firing of all weapons, including the moving vehicle course, and in all phases of combat training.

With the arrival of 14 selectees for the 4th Cavalry Medical Detachment, that unit is now at full strength. It is divided into squadron sections, each section receiving its cavalry training with the squadron to which assigned.

The training activities of the regiment were inspected on April 25th, by Lieutenant Colonel C. H. Gerhardt, GSC, representing GHQ. The Corps Area Annual Inspection of the Post was conducted by Lieutenant Colonel Sexton Berg, Inspector General's Department, during the period April 23-25, inclusive.

Now that spring has returned to Fort Meade, outdoor recreational activities are in full swing. A regimental softball league, with entries from all units, is functioning with great enthusiasm, and several supervised trips to points of interest in the Black Hills have proven very popular with the men. The regimental newspaper, *The Fourth Cavalry Scout*, has just published its sixth issue, and has optimistic plans for the future. It is planned to continue publication of the paper in the field during maneuvers.

April 7th was observed as Army Day at Fort Meade. A regimental review was held in the afternoon, before an estimated attendance of 1,500 Black Hills residents. A great deal of publicity was given the event by all local newspapers and radio stations, and much favorable notice accrued to the 4th Cavalry as a result.

* * *

Fifth Cavalry—Fort Bliss, Texas

COLONEL H. J. M. SMITH, *Commanding*

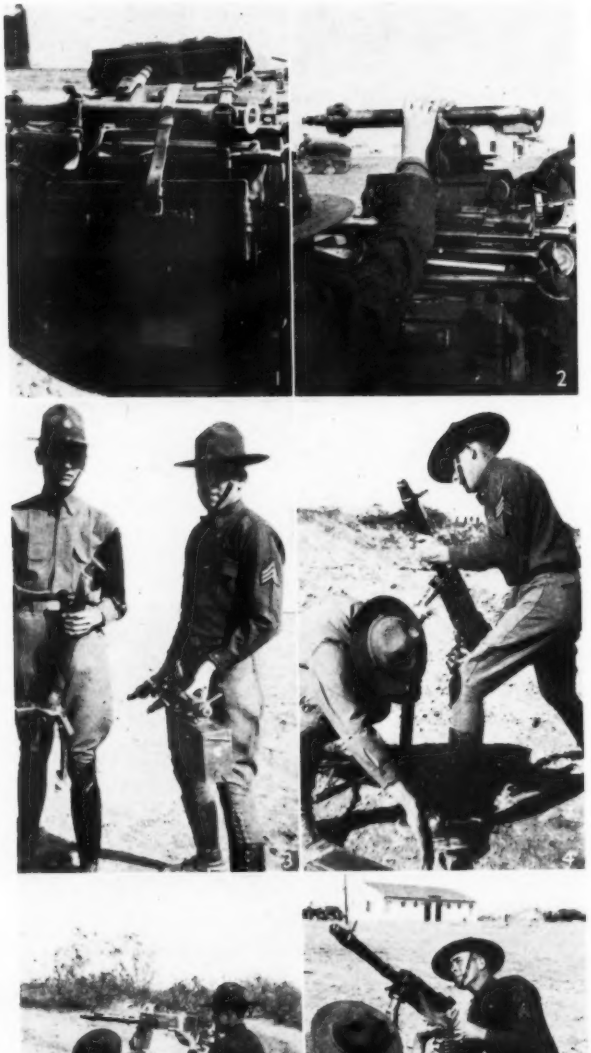
Since its arrival at Fort Bliss in February, the Fifth Cavalry in addition to training activities has been busy making the camp more comfortable for its personnel. A limited landscaping project is being accomplished through the planting of trees, hedges and shrubs with a view of not only beautifying the camp area but of eventually utilizing the hedges as wind breaks in the tent areas.

The training in the Regiment has been progressing rapidly, and by May 10th, the phase of instruction which includes squad, platoon and troop training will have been completed. In conjunction with this training program, the following schools have been conducted:

Officers' Equitation Class
Noncommissioned Officers' Equitation Class
Intelligence School
Buglers' School
Umpires' School.

The Regiment during the month of April turned to duty with their respective troops, two hundred and eighty-seven (287) Selective Service men and recruits from Detachments No. 1 and No. 2 who have completed their six (6) week period of recruit instruction. Records in the Personnel Section show approximately 50 per cent of these selectees to be either skilled or semi-skilled.

Two hundred and forty (240) remounts from the Fort Reno Remount Depot, the second group assigned to the Regiment since its arrival at Fort Bliss were received on Monday, April 14th. The horses were assigned to troops and were placed in working quarantine. Under the supervision of Lieutenant Colonel Glenn S. Finley, the remount detail is doing excellent work in training the new horses and will turn the major portion of them to duty in the near future. A large portion of the horses received were already trained for troop duty upon arrival. The remainder will be turned to duty as soon as their training warrants it.



Light machine-gun mount

New Light Machine Gun Mount

Under the supervision of Major Hugh F. T. Hoffman and Lieutenant Donald W. Kaspervik, an addition to the tripod for the Light Machine Gun has been developed and is undergoing tests. The new mount is in the form of an extension which may be added to the standard M2 Tripod and makes the gun more suitable for defense against low-flying aircraft. The extension is extremely valuable in terrain such as is found around Fort Bliss, where small sand dunes and desert vegetation make a horizontal field of fire very limited to guns utilizing the M2 tripod as issued.

The new extension raises the elevation of the gun above the tripod about twenty inches.

Exhibit No. 1 shows the extension in pack. No. 2 illustrates its removal from the pack. No. 3 shows it being carried into position with the tripod. No. 4 shows the gun being placed in the extension. No. 5 illustrates its use in a horizontal position and position of gunner and assistant, and No. 6 demonstrates its use as anti-aircraft defense against low-flying planes.

* * *

On April 7th, the Regiment participated in the observance of Army Day. The entire Fort Bliss area was open to inspection by visitors during the day, and during the afternoon the Regiment took its place in the Division Review. Immediately following the review, a demonstration of Portée Cavalry tactics by a composite platoon composed of squads from Troops "E," "F" and "G," commanded by Second Lieutenant Alvin T. Netterblad, with an attached platoon of scout cars, motorcycles and Bantams commanded by Second Lieutenant William A. Bownds, Jr., which acted as a protective screen during the motor movement and the unloading. Following this demonstration, the Mortar Platoon of Special Weapons Troop, commanded by Second Lieutenant Edwin O'Connor, Jr., gave a demonstration showing hasty action and firing of the 81-mm. Mortar.

The First Cavalry Brigade Training Sweepstakes for all officers of the Brigade below the grade of Captain was held at the Armstrong Polo Field and Hunt Course on Tuesday, April 15th. The course consisted of a 300-yard dash, a saddling race, cross-country ride of about 3 miles, dismounted pistol and rifle shooting, saddling of a new mount, jumping phase of 8 jumps, unsaddle—ride bareback over one jump, dismount and lead over the finish line.

Out of a large field of contestants, a tie for first place between Second Lieutenant Jackson E. Shirley, 5th Cavalry, and Second Lieutenant James R. Spurrier, 12th Cavalry, resulted. The time for both contestants over the course was 25 minutes. These officers received duplicate awards of two silver goblets. Presentation of trophies was made by Major General John K. Herr, U.S.A., Chief of Cavalry. The trophies were donated

by the Division Commander, Major General Innis P. Swift, U.S.A., and by the Brigade Commander, Brigadier General John Millikin, U.S.A.

During the week of April 21-25, the Regiment participated in a beneficial four-day field exercise of the First Cavalry Brigade, in the vicinity of the Fort Bliss Target Range.

The Division Alert signal was sounded Monday, April 28th. The tactical situation called for a movement of the 5th Cavalry as part of the Division, to a point 15 miles east of Fort Bliss, where the Regiment bivouacked and an outpost from the regiment, under Brigade control, was established for the night. The Regiment returned to Fort Bliss the following day.

A school for all officers of the Regiment, covering the subject "Training in Umpire Methods" has been established with Major Woodbury M. Burgess as instructor. The school will be of two weeks' duration and will familiarize all officers with umpire methods in preparation for contemplated maneuvers in the near future.

A Regimental Horseshow was held on April 5th in the camp area. Outstanding horses and riders of the show were selected to represent the Regiment in the Division Horseshow.

During the month of April, the Regiment was host to Mr. Ernie Pyle, popular syndicated columnist, who spent the night as guest of Troop B.

* * *

Proud Fighting Men

*By Ernie Pyle**

Fort Bliss, Texas.—The Fifth Cavalry, with which I am bunking in for a while, is 86 years old.

It was organized at Louisville, Kentucky, in 1855, and its first commander was Robert E. Lee. It served throughout the Civil War, helped capture Alexandria, Virginia, from the Confederates, and fought at Bull Run, Antietam, Gettysburg, Appomattox.

It has fought Indians all over the mountains and prairies of the West. It has served in Puerto Rico, the Philippines and Hawaii. It chased Villa in Mexico.

Twenty-seven of its enlisted men have received the Congressional Medal of Honor, America's highest award. It is an old and war-scarred regiment, and exceedingly proud.

* * *

Cavalry today is much different from what it was last century; even much different from what it was 20 years ago. There are those who pass cavalry over lightly as a thing of the past, but you'd better not say that seriously to a cavalryman.

The day is gone when it was the policy of cavalry to attack while mounted. Today cavalry carries terrific fire power, and its main theory is to get that fire power to the point of battle over country which mechanized equipment cannot negotiate.

This sandy, cut-up desert land of the border area is where cavalry shines.

A cavalry regiment today is not just horses and men and rifles. It is also trucks and trailers and machine guns and howitzers and antitank units and scouts.

* * *

If the Fifth Regiment were suddenly to receive orders into battle 150 miles down into Mexico, it wouldn't saddle up and charge out on a forced ride across the desert. Everything, including the horses, would go into trucks and trailers.

It would dash forward to battle on its rubber-tired wheels, and go to the point where wheels could no longer negotiate the sand and the humps. Then the horses would be unloaded and packed quickly, and would continue on toward the enemy.

And then, when contact was made with the enemy, the cavalrymen would dismount, set up their guns and start shooting. And they can do all this faster than it takes to tell it.

They can stop from a full gallop, unpack and assemble a howitzer or a machine gun, aim and have it firing in nine seconds! I've seen them do it. Horses, men and machines all flow in one swift, harmonic movement. It is thrilling to watch.

* * *

On my last day at Fort Bliss, the whole First Cavalry Division passed in review before Major General Swift and Major General John K. Herr, Chief of Cavalry, who was visiting from Washington.

It was a Saturday morning. When we arrived, we could see the men lined up in vast formation far across the bare, flat desert. The generals and their staffs and all the flag-bearers were on this side of the vast parade ground.

Then the band started to play and the two generals, both hale and agile men past 60, dashed forward on their horses, followed by three horsemen carrying standards on poles.

They reached the assembled regiments on the far side, and rode the entire length in front of them, and then the entire length behind them. They went at a gallop, riding plenty hard, and it was impressive to see them ride so fast.

They rode back and took their places out front, still mounted, to receive the review. The band blew an order, and that great black mass on the far side began slowly to move.

The troopers were close-packed. They must have been riding 20 or 30 abreast, row after row, until it seemed that all the horses in the world were assembled there.

Dust rose from the column, and underneath you could see the prancing hoofs of fractious horses. Some-

*From Mr. Pyle's syndicated column, May 5, 1941.

how it had the character of an irresistible force on the move; it had a grandeur that I have seen produced before only in movies. It was a massive grace.

A friend of mine from Cleveland, on his first trip to the Southwest, stood and watched with an almost reverent admiration. And when he was told that between a third and a half of these 6,000 riders had never been on a horse until two months before, he was unbelieving.

It was an impressive spectacle. It made something glow inside of you. And when at last the old Fifth Cavalry came in its turn and lowered its standard in salute, and all its men rode past with the slow, massed rhythm of perfectly trained movement, I'll swear I felt almost as much pride in them as though I had really honestly belonged to the regiment.

* * *

7th Cavalry—Fort Bliss, Texas

LIEUTENANT COLONEL F. W. BOYE, *Commanding*

The first part of March was devoted to combat firing by the various troops of the Regiment. Regimental, Brigade, and Division CPX problems made the month of March a very complete training schedule.

During the month of April the training schedule of the Seventh Cavalry was slightly interrupted by Warner Brothers' Motion Picture Company in the making of the picture "Here Comes The Cavalry," in which the Seventh Cavalry "Garry Owens" were the chief participants. Rather than hindering the troops in their regular training, it was a great help in promoting a regular turn out of the troops. The officers and men put their various units through all the tactical formations necessary to show the operations of Horse Cavalry. In order to select terrain for the various tactical situations the troops moved some distance from the post and worked overtime in order to get their regular assigned duties and training accomplished.

The Seventh Cavalry is now practicing river crossings in coöperation with the 8th Engineers as preparation for extensive maneuvers in the swamplands of Louisiana. The Regiment practiced crossing the Ascarate Lake, a new park lake built by the County of El Paso for the recreation of nearby inhabitants. The lake is one hundred (100) yards wide and approximately one mile long.

The first problem was one of river crossing in which dismounted squads, using squad assault boats, cross the stream and secure the opposite ground thus forming a bridgehead or protecting force to cover the crossing of the main body.

The second phase was the construction of a footbridge. This was swiftly accomplished, eight minutes only being required to bridge the 100-yard stream.

The final phase was construction of a bridge to support mounted troops. All horses, including a great number of new remounts, crossed without difficulty. Similar success in other tactical training indicates the Seventh Cavalry will not fail to maintain its high standard in performance of duty during the coming maneuver period.

The training of small units the size of squads and platoons is the present objective of the Regiment. Competition between the various platoon leaders on their skill in handling platoons in varied tactical situations is contemplated for the near future.

THE SEVENTH WINS FIRST CAVALRY DIVISION HORSESHOW

After a short but profitable period of preparation, the 7th Cavalry entered the 1st Cavalry Division horseshow on April 8th, and wound up victorious in respect to final unit standing. In the class for remounts we made a superior showing, winning the first three places. Other winnings included:

1st in Horsemastership (recruits)
1st in Officers' Chargers
2d and 3d in Open Jumping (enlisted men)
3d in Open Jumping (officers)

The excellent showing made by the regiment was largely the result of the continued work of a handful of noncommissioned officers including: First Sergeant Witaski, First Sergeant Shrout, Staff Sergeant Long, Staff Sergeant Ford, and First Sergeant Brett. These men either rode or had previously trained every entry in the show.

REMOUNT

1st--*Captain Easy,* Sergeant Walter Witaski.
2d —*Oregon,* Sergeant Clarence E. Long.
3d —*Raney,* Sergeant Ambros Shrout.

HORSEMASTERSHIP (Recruits)

1st—*Cloudy,* Private Walter C. McMillan, MG Tr.

OFFICERS' CHARGERS

1st—*Taps,* Lieutenant Scott M. Case.

OPEN JUMPING (Enlisted Men)

2d —*Navigator,* Sergeant Walter Witaski.
3d —*Top Load,* Sergeant Robert L. Ford.

OPEN JUMPING (Officers)

3d —*Ugly,* Captain Franklin F. Wing, Jr.

ATHLETICS

The Seventh Cavalry Athletic Program is under way on a large scale. Six hundred and thirty ($630.00) dollars were obtained from the Division Athletic Officer for the purchase of athletic equipment. A new baseball diamond has been built and electric lights are to be installed for evening ball games.

Lieutenant Grant E. Jones, Regimental Athletic Officer, is training a boxing team to participate in the 1st Cavalry Division boxing tournament. With a few professional fighters as his assistants the motto "The Seventh First" will in all probability be maintained.

The Chief of Cavalry Arrives

Major General Herr, Chief of Cavalry, visited the Seventh Cavalry shortly after his unheralded arrival at Fort Bliss, driving with Major General Innis P. Swift, Commander of the 1st Cavalry Division, to the scene of a field exercise being conducted by both squadrons of the regiment in the vicinity of the Hueco Mountains.

This exercise, held for the purpose of instructing junior officers and enlisted men, commenced at five o'clock on the morning of April 16th, after the Squadrons had spent the night in separate camps. Sealed orders, opened at this time, directed the Squadron Commanders to maneuver against assigned objectives. Colonel Gilbreath and Lieutenant Colonel Boye acted as umpires for defensive and offensive, respectively. At the conclusion of the exercise a critique was held. During the critique the Chief of Cavalry and General Swift arrived upon the scene. After a short review of the exercise by Colonel Gilbreath, a brief talk was given by General Herr on the use of horse patrols, their bold seeking of vital information; the importance of curtailing the length, and strictly limiting the number of communications in the field. This, relative to speeding up cavalry operation in the field.

On the following day the Seventh Cavalry held a demonstration for General Herr in which each troop participated as follows:

Sequence	*Troop*	*Demonstration*	*Time*
1.	SW Tr.	Plat. Cal. .50; Mortar Section	8:30 AM
2.	2d Sq.	Approach march; Covering force	8:40 AM
3.	MG Tr.	Cross country; Hasty action	9:00 AM
4.	HQ Tr.	Comm. Plat.: Message Center	9:10 AM
5.	Tr "B"	Dismounted Action	9:20 AM
6.	Tr "C"	Sq. in Pistol Attack	9:25 AM
7.	Tr "A"	Full Pack: Mounted Troop	9:30 AM

The above sequence moved swiftly to completion, one demonstration following another with no time break. General Herr was pleased to find that the regiment was training the small combat teams to a high degree of proficiency.

Letters of Commendation

Letters of commendation have been received from Colonel Gilbreath, the Commanding Officer of the Regiment and Major General Innis P. Swift, 1st Cavalry Division Commander, for the enthusiasm and efficiency displayed by the regiment during the filming of the picture "Here Comes The Cavalry." Although participation was an official duty, it was performed in a manner that brought praise and appreciation from the entire Warner Bros. staff.

Notes*

The regiment regrets the loss of its Commanding Officer, Colonel Frederick Gilbreath, who left for duty at the Port of Embarkation, Fort Mason, California, on May 1st. On April 29th, the officers of the Seventh Cavalry gave a party for their departing Commanding Officer in the traditional "Garry Owen" style. Lieutenant Colonel Boye will command until further orders.

* * *

Colonel and Mrs. Gilbreath gave a tea for General and Mrs. Herr and their daughter Miss Fannie Herr. All officers and ladies were invited. The event gave the officers of the Seventh Cavalry a chance to meet General Herr, the present Chief of Cavalry and a former commander of their regiment, and an opportunity to discuss the events of the day.

* * *

Major Henry S. Jernigan left on April 16th for a course commencing on April 21st, at the Command and General Staff School, Ft. Leavenworth, Kansas.

* * *

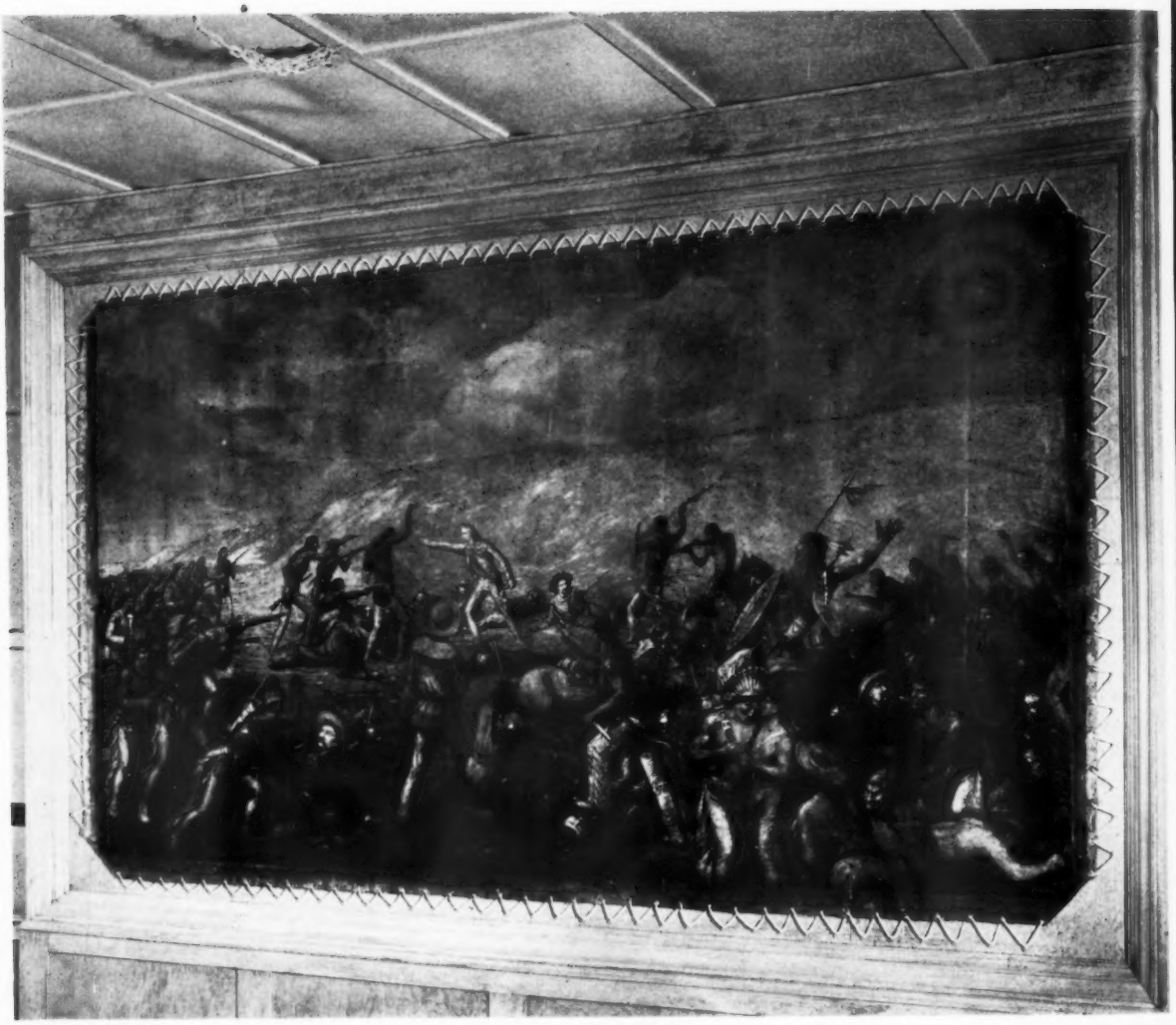
History of Original Painting "Custer's Last Stand"

This original canvas was painted by Cassily Adams, and is nine feet, six inches wide and sixteen feet, five inches long. The painting was painted on a canvas wagon cover issued by the Ordnance company at that time. It is now hung in the Post Officers' Club at Fort Bliss, Texas, for the reason that the 7th Cavalry has no building large enough to display it. Mr. Adams painted the picture according to Scout Curley's version of the battle of the Little Big Horn, June 25, 1876.

The 7th Cavalry regimental history files show that Mr. Adams completed the painting in 1888, and sold it to a John Ferber who owned a saloon in St. Louis, Mo., in which the painting hung for approximately six years. The late Adolphus Busch, Sr., desired a scene that depicted the west and purchased the painting from the estate of the late Mr. Ferber in 1892, and displayed it in the Anheuser Busch, Inc., reception room. According to Mr. Busch the painting was purchased at the price of $35,000.

At the outbreak of the Spanish American War in 1898, Mr. Busch presented the painting to the Seventh Cavalry, then stationed at Fort Riley, Kansas. The presentation took place during the ceremony in the old consolidated Mess Hall (Now the Post Exchange Building), at Fort Riley. Captain J. M. Bell, Regimental Adjutant, 7th Cavalry, acted as Chairman and Colonel George A. Forsythe, Regimental Commander at that time, received the picture in behalf of the regiment. A number of officers who participated in the battle of the Little Big Horn were present at the ceremony and made speeches describing the battle.

During the period from 1909 to 1922 the picture was rolled on a tent pole and stored in the Quartermaster



Warehouse at Fort Bliss, Texas, the regiment was constantly changing station during this period. In 1922 the painting was retrieved from the Quartermaster warehouse by the 7th Cavalry Regimental Supply Officer and placed in the Regimental Supply storeroom until 1934; at this time it was unrolled and arrangements were made for the renovation of the painting.

This picture was renovated by Mr. Raymond O. Richards, Assistant Director, Federal Art Project, November 14, 1938, at Fort Bliss, Texas.

* * *

8th Cavalry—Fort Bliss, Texas

COLONEL JOHN K. BROWN, *Commanding*

Rapid expansion of the U. S. Army has caused many changes in the regiment since January 1st. Cadre regiments for new organizations and other stations have depleted the ranks of many noncommissioned officers and men, including such old timers as Master Sergeant Frank Wojohosky, First Sergeant Harry G. Zink, who had been with the regiment since 1917, First Sergeant Andrew J. Miller, Sergeant William R. McLain, with the regiment since 1919, Staff Sergeant Oliver D. Milton, with the regiment since 1920, Corporal Andy B. Cehand, with the regiment since 1921, Sergeant Ruben T. Vona and Sergeant J. J. Mullings, with the regiment since 1923, Sergeant Glen L. Franklin, with the regiment since 1924, Sergeant Andrew J. Williams, with the regiment since 1926, Sergeants John B. Durham and Harold J. Young, with the regiment since 1927, Sergeant Jack Mann, with the regiment since 1928, Sergeant Rollo J. Heckert, with the regiment since 1929, and Sergeants James H. Sanderlin and Dale Woosley, with the regiment since 1931.

A total of 302 enlisted men have been lost in this manner.

Basic training has been given to 350 selectees who are now shaping up into first class troopers. Many grand remounts were enrolled in Lieutenant Colonel John H. Irving's grammar school for Cavalry horses, and 876 received diplomas.

Tactical training for small units, squad and rein-

forced platoon, has been stressed during this period. Over-night marches in January and February were conducted by the troops. Each squadron, reinforced, spent a week in the field during April. Particular emphasis was placed on night marching and night maneuvering, and a great deal of training was obtained by all concerned, horses as well as men.

A controlled night ride over a 20 mile course for all Lieutenants was held on February 7th. The use of compass bearings over a good part of the terrain was necessary, while visibility, movement and tempers were taxed by every possible weather obstacle, including dust, wind, rain, snow, and cold. Despite keen competition and enthusiasm, perseverance eventually resulted in victory and pot money for Lieutenant R. E. Meyer, Headquarters 2d Squadron, first place, and Lieutenant A. J. Maurel, Motor Officer, second place.

A group of United Press writers and staff officers from General Headquarters, Washington, were treated to a demonstration by a war strength troop from the Second Squadron in action against an enemy motor column in January.

The demonstration was conducted in the form of a combat exercise fixed on the gravity range at Castner. Twelve improvised, miniature trucks were rolled down the mountain side simultaneously to provide the target. Despite an attained speed of over 30 miles per hour during descent, all cars were hit many times and only three escaped being burned before reaching the bottom. The newspapermen expressed surprise and pleasure at the speed with which the troops were able to go into action and the accuracy of their fire against a fast moving target.

Officers schools are being conducted each Saturday by the regimental commander, many of these being in the form of tactical rides. These rides, in bringing out tactical principles in the employment of cavalry, have generated much discussion and have proved very beneficial as a practical form of instruction. Culminating in the "bondocks" at a point from which exude the fragrant odors of broiling steak sandwiches and brewing coffee prepared by details from Headquarters Troop, the rides, according to all concerned, reach a delightful and befitting cdlimax.

Classes in horsemanship for both officers and noncommissioned officers have continued throughout the fall and winter.

In preparation for the Division Horse Show held on April 18th, the regiment, during March and April, conducted a series of informal Sunday shows. The utility of these was shown by the results obtained in the Division Show. Individual honors were won by Major Thomson on his *Reno Jerry* with a first in the open hunters class; Major Drake on his *King Hi* with a first in the open jumping class; Major Biddle on *Reno Hawk* with a second in the open hunters class; Lieutenant Jeffress on *Sadie* with second in the Officers Chargers' Class; and Private Edwards, Troop "F," with a second in Recruit Horsemanship. However, emphasis is being placed on developing new riders and remounts, of which there are many good ones.

Early spring polo practice on the sand field occupies most Wednesday and Saturday afternoons.

Keen personal interest is being taken by the regimental commander and other field officers in this valuable means of training officers and horses, and many excellent ponies and riders are being developed. A new boarded sand ring is being taken advantage of for horse training as well as a new fenced ring on the western edge of the drill ground.

The first two days of May found the regiment holding its periodic test of tactical training. The exercise was so designed as to test the reinforced platoons of each troop in march discipline, horsemastership, use of weapons, and the employment of the cavalry platoon on a combat mission in hostile territory. The platoon was conducting routine pistol practice at Winfrees Nose when it received orders that sent it on a 20 mile march through enemy country. During the march the platoon was confronted by several tactical situations that finally culminated in a combat problem with ball ammunition during which the supporting fire of the light machine guns to assist the close-in envelopment by the balance of the platoon was emphasized.

During this period the following changes in officer personnel have taken place: To the Philippine Department, 2d Lieutenants A. K. Whitehead, D. B. Troglia and C. I. Cahoon; to aide-de-camp to Major General Swift, 1st Lt. Roy Lasseter, Jr.; to 1st Reconnaissance Squadron, Captain R. W. Porter, Jr., 1st Lieutenants J. Fishback and L. Caton, Jr.; 2d Lieutenants J. D. McGuire, A. G. Robinson and S. E. Teaff, Jr.; to the 10th Cavalry, Captains N. M. Winn and F. H. Gaston, Jr.; to Headquarters Troop 2d Cavalry Brigade 1st Lieutenant E. T. Guenther; to the 5th Cavalry, Captain J. M. Broadwell, VC; to Headquarters 2d Cavalry Brigade Weapons Troop 2d Lt. J. P. Whitehead; to Fort Knox, Lieut. Colonel L. LeR. Martin; to Division Anti-Tank Troop, 1st Lieut. J. Berg; to 12th Cavalry, Major Alexander M. Miller, III; to the Armored Force, Major K. G. Hoge.

The following officers joined the regiment: Majors E. F. Thomson, W. S. Biddle, K. G. Hoge and R. A. Drake, Captains A. F. Dworak, MC, and F. M. Burkey, VC, 1st Lieutenants G. S. Downer, Jr., I. L. Howell, and W. W. Phillips, and 2d Lieutenant J. C. Gerhart.

* * *

10th Cavalry—Camp Funston, Fort Riley, Kansas

LIEUTENANT COLONEL PAUL R. DAVISON,
Commanding

The last two months have been busy ones for the 10th Cavalry.

After the regiment's arrival here the middle of March it started in on getting settled in its new home, and training selectees and remounts.

Shortly after the first of April the regiment received the rest of their selectees and 340 remounts to bring it up to its authorized strength and it is now well along on its thirteen weeks' training program.

The Second Army Commander, Lieutenant General Ben Lear, visited the Camp on April 9th. After participation in a division review with other units of the 2d Cavalry Division the regiment was inspected in all phases of its training.

On April 25th a regimental review was held in honor of the Division Commander, Brigadier General Allen.

A softball league has been organized within the regiment and a regimental baseball team to play in the Division league is being organized.

* * *

11th Cavalry—Seeley, California

COLONEL HAROLD M. RAYNER, *Commanding*

Moving into the home stretch of selectee and remount training after a brief break for observance of the Regiment's fortieth anniversary May 5, 1941, the 11th Cavalry, under leadership of Colonel Harold M. Rayner, continues its "all out" effort to bring men and horses to the traditionally high level of Cavalry efficiency.

Despite handicaps imposed by personnel and animal cadre losses, by a change of station to an entirely new territory, and by an influx of new officers, 700-odd selectees and nearly 800 remounts, the Regiment has met difficult schedules of intensive training; will turn its new men to duty May 31.

For officers and men two events brought a welcome relief from drill and schooling during the past month: Army Day was celebrated at the Seeley and Campo stations April 7, and both the Regiment and the detached 2nd Squadron staged Organization Day ceremonies May 5.

That the 11th Cavalry has earned a place in the community life of the Imperial Valley was demonstrated April 7 when a crowd of 8,000 people (exceeding expectations of attendance by 5,000) thronged the Seeley camp for Army Day. Faced with problems of inadequate equipment and a dearth of experienced troopers to "put over" a show, Colonel Rayner had, nevertheless, set in motion the machinery which, engineered by a joint military-civilian committee, produced a bang-up program. Provisions for handling a crowd of 3,000 were made—and during the afternoon of the open-house, throngs more than double that number crowded through troop streets, mess halls and stables to view arms and equipment displays, and to witness a two-hour demonstration of motor and horse elements which culminated in presentation of selectees in their first Retreat parade.

Organization day was celebrated at the desert station and included presentation of selectees to the Standards, address by the Regimental Commander, a reading of the regimental history by the junior Regular Army officer, and an informal horse events program under direction of Major W. J. Bradley, S-3. The morning program was followed by organization dinners; an afternoon holiday. Included on the gymkhana program were classes in novelty jumping, potato race, tug-of-war, mounted wrestling and remount and recruit classes.

The 2nd Squadron at Campo varied its observance by staging a dismounted gymkhana May 5. It had previously held a horse show and mounted gymkhana with civilian organizations participating April 27.

Since the Regiment's move to the Imperial Valley in November of last year it has undergone two inspections of training by higher headquarters. Fourth Army experts viewed combat problems by both squadrons late in January and on May 1 an inspector from General Headquarters, Washington, scanned departmental activities of the MTP 2-2 training. This second inspection was marked by an entirely new departure for the 11th Cavalry when senior non-coms replaced officers and staged a dismounted parade before the ranking master sergeant and the inspector, who, incidentally, was Lt. Col. C. H. Gerhardt, a former squadron commander and operations officer of the regiment.

The Scout Car Platoon was given a welcomed opportunity for combined training April 28-29 when it was invited to participate in a motor march in the Cuya-

maca with the 8th Regiment of Marines. It was the first extended jaunt for the new M3A1 cars with which the Regiment was equipped in March. Lt. Glenn C. Ames commands the platoon.

Picked gunners and drivers of the Seeley garrison showed Hollywood "how it's done" last February when the Scout Car platoon and a composite light machine gun platoon demonstrated tactics and technique of their cars and weapons for the benefit of Scenarists William Ulman and John Grey of the Academy of Motion Picture Arts and Sciences. Ulman and Grey, with the technical assistance of Major John Ballantyne, Cavalry, were preparing scenarios for a War Department training film on the employment of these two platoons. This month Lt. Col. Alton W. Howard, 11th Cavalry, was designated technical advisor for the Light Machine Gun Platoon film, which will be photographed here. Lt. Claire S. Curtis, 11th Cavalry, will command the picked platoon for the film.

Sites for combat training areas were inspected earlier this year by Lt. Gen. John L. DeWitt, Fourth Army commander. He was accompanied by his aide, and Lt. Cols. James Bradley (Army G-3) and Gustav Braun (Corps Area G-3). A dinner given by the El Centro Chamber of Commerce for the General and officers of the camp followed the inspection.

Provisional regimental horse show and pistol teams have been formed for temporary periods during the past several months for participation in valley shows and matches. The intensive training program does not permit permanent teams with regular practice periods.

Commissioned ranks, since last report, have been augmented by the following reserve officers: Major Verne Austin, Bakersfield; Capt. Robert F. Bates and Lloyd G. Buchler, both of Sacramento; Capt. Marvin C. Clark, La Jolla; Capt. Albert P. Ebright, Los Angeles; Capt. Wm. A. Hill, Long Beach; Capt. Ben Hooper, Los Angeles; Capt. John A. Magee, Norfolk; Capt. H. J. Rosenberg, San Francisco, and Lts. Edward Boust, San Francisco; E. A. Bright, Charles Fife, Frank W. Fruitman, Joseph Kazerman, J. B. O'Connor and Nathan Carll of Los Angeles; C. O. Brown of San Diego, C. W. Carlson of Southgate; George F. Wilson of San Gabriel; Charles Yon of Piedmont; David Coale, Glendale, and Edwin Ramsey of Manhattan Beach.

Regular Army additions include Lt. Col. Frederick Herr, new executive officer, and Major A. N. Willis, who commands the 1st Squadron. Losses: Capt. James Snee (to Armored Force) and Lt. Stephen Downey (aide to Gen. Terry Allen). Lt. Snee commanded Troop F; Lt. Downey, Machine Gun Troop.

12th Cavalry—Fort Bliss, Texas

COLONEL WILFRID M. BLOUNT, *Commanding*

An Officers' Club was organized on March 12, 1941 and a constitution adopted. The club is known as the "Twelfth Cavalry Officers' Mess" and is controlled by a Board of Governors elected as follows: Major Henry L. Kinnison, Jr., Captain Raymond C. Adkisson, 1st Lieut. John G. Anderson, 2d Lieut. James R. Spurrier and 2d Lieut. Rowland H. Renwanz. Colonel Wilfrid M. Blount is ex-officio President and 2d Lieut. Edward K. Duncan is Secretary-Treasurer of the club. The object of the club is to promote entertainment for officers of the 12th Cavalry, their families and their guests.

The Regiment is now filled up with 1,474 horses. Selectees have been turned to duty and 212 more will join their troops in a few days. 240 remounts were turned to duty in April and 192 will complete their remount training during May.

In the night ride held for Lieutenants of the 1st Cavalry Brigade to demonstrate their ability to find their way across country under cover of darkness, and to judge their ability at estimating their rate of travel without the use of a watch, the 12th Cavalry was very successful. Contestants rode in pairs over a course totaling eighteen miles in length divided into six stages. The 12th Cavalry furnished the winners of first place and ties for second place. The first place winners were David J. Loyd and Norvell R. Stark, 1st Lieutenants, 12th Cavalry; and 1st Lt. Rhea A. McWilliams and 2d Lt. Michael W. Kelly, 12th Cavalry tied for second place with 1st Lt. Charles L. Stahler and 2d Lt. Harry C. Grigsby, Headquarters Troop, 1st Cavalry Brigade.

In the Modified Standard Stakes, held on April 15th by the Commanding General, 1st Cavalry Brigade, the 12th Cavalry again met with due success. This contest started and finished at Armstrong Polo Field and consisted of a cross-country race, rifle firing, Hurdling Course, pistol firing, and a bareback ride to the finish. There was a tie for first place between 2d Lt. James R. Spurrier, 12th Cavalry and 2d Lt. Jackson E. Shirley, 5th Cavalry with each being awarded a cup by the 1st Cavalry Brigade. The 12th Cavalry Officers' Mess awarded trophy cups to the next three highest scores from the 12th Cavalry which were awarded to 1st Lt. Richard Alexander, 1st Lt. Levin L. Lee and 1st Lt. Michael S. Davison. A good time was had by all and these tests are to be encouraged.

The regiment was in the field from April 21 to 25 inclusive in a brigade maneuver. The maneuvering area was in the vicinity of Hitts Ranch, Dona Ana Range, and Berino with a night march from Hitts Ranch back to Fort Bliss. During this period a number of minor administrative and supply irregularities were ironed out so that the regiment was well prepared for the Division alert which came two days later and involved an overnight exercise near the Hueco Mountains. The 12th Cavalry was an efficient, smooth functioning unit receiving many comments.

Training tests are being conducted for all units and the regiment is making rapid progress towards a high tactical proficiency to be put to good use during the summer maneuvers.

13th Armored Regiment (L)—Fort Knox, Ky.

COLONEL R. E. MCQUILLEN, *Commanding*

The fortieth anniversary of the organization of the 13th Cavalry, now the 13th Armored Regiment (Light) was observed here Thursday (May 1st), in a 45-minute ceremony at the regimental parade ground.

Formed in a three-sided formation facing the reviewing stand, the officers and men were addressed by Brigadier General Jack W. Heard, former colonel in command of the regiment, now in command of the Armored Force Replacement Center at Fort Knox; Colonel R. E. McQuillin, present commanding officer; and Lieutenant Colonel Clarence C. Benson, regimental executive and an officer originally assigned to the regiment in 1914. A brief history of the regiment was read by Lieutenant Robert B. Borchers. Atop the reviewing stand, in rear of the reviewing officers, were the color guard and the bugle corps.

The old 13th Cavalry, organized at Fort Meade, South Dakota, on May 1, 1901, under the command of Major Thaddeus W. Jones, has participated in two wars. In 1903, the regiment saw service in the Philippine Insurrection, and in 1916 it served in Mexico as part of General Pershing's punitive expedition.

One of the columns of the 13th Cavalry advanced the farthest south into Mexico of any of the American troops pursuing Villa. Another column formed part of the rear guard of the punitive force when U. S. Troops were withdrawn from Mexico, making the 13th Cavalry the first in and last out of Mexico.

The 13th Armored Regiment is now under the command of its seventeenth colonel. A former commanding officer of the regiment is Major General Charles L. Scott, now in command of the 1st Armored Corps.

Most of the service of the 13th has been in Western camps. In July, 1936, the regiment was transferred to Fort Knox to become the second mechanized regiment of cavalry in the United States. On July 15, 1940, the 13th Cavalry (Mechanized) was changed to the 13th Armored Regiment (Light) and became a light tank regiment in the 1st Armored Division.

The regimental insignia, known as the "Chalbedon," includes the history of the regiment and bears the regimental motto, "It Shall Be Done." Green on gold, and circular in form, it is easily recognized on the uniforms of the officers and men of the regiment. The blazing sun in the center is taken from the seal of the state of South Dakota, regimental birthplace. The crossed sabres across the face of the insignia represent the basic Cavalry organization. The palm branch forming the right side of the circle commemorates the service in the Philippines, and the cactus branch forming the left side is for service in Mexico. On a scroll suspended from the hilts of the sabres is the motto awarded by the War Department—IT SHALL BE DONE.

Sixth Reconnaissance Troop—Fort Riley, Kansas

CAPTAIN F. C. BRIDGEWATER, *Commanding*

Upon returning from a practice march to Fort Bliss, Texas, early in February, the troop lost its first commander, Major (now Lieutenant Colonel) M. E. Jones, who so ably organized and trained it.

On February the fifth, Captain Bridgewater assumed command, relieving Major Jones, who was under orders to attend the Command and General Staff School, Fort Leavenworth. During March, First Lieutenant R. E. Nelson and Second Lieutenant Walter J. Davies graduated from specialist schools at the Cavalry School and returned to the troop for duty. First Lieutenant William F. Beaty left the troop at this time to attend the Basic Horse and Mechanized Course at the Cavalry School. The troop has been very fortunate in being able to send a considerable number of enlisted men to various technical schools throughout the army, and their knowledge gained thereby has aided considerably in bringing the troop up to its present high standard of training.

Until March 23d, the troop was engaged in completing its basic training. Since that date the training has been of a more advanced nature, consisting of at least one command post problem and one combined field exercise each week. Although the troop has received no radios, exercises have been conducted using mounted messengers. The command post exercises have been of such a nature that commanders of platoons, sections and cars have had an opportunity to employ their commands tactically, operate unit message centers, and send and receive messages. In the combined field exercises the presence of both enemy and friendly troops was assumed, and the troop reconnoitered areas about twenty-five miles wide and one hundred miles in depth, operating during the night at well as during the day. These exercises started one day and terminated the next. Making and breaking bivouac under the cover of darkness without lights was part of the problems. These exercises were conducted with the view of stressing the tactics of reconnaissance, the issuance of orders, security and cover in bivouac, communications, supply and maintenance, all during combat. Quite a bit of interest was displayed by the entire troop and everybody enjoyed getting into the field and doing the things they had talked about so much in troop schools during the earlier training.

The training of radio operators has been continuous with code practice equipment EE-81-A. During field exercises, radio operators operate message centers, and follow the same procedure in sending and receiving messages, that they would use if they actually had sets. About seventy-five per cent of the troop has been trained in radio operation, and, at present, many qualified operators are available to take the field.

The troop conducted various tests with Bantams for the Cavalry Board and found that they were capable of

replacing the tricycle and the motorcycle, and that when used with scout cars they make a fine reconnaissance vehicle. A .50 caliber gun mounted on a pedestal mount in a Bantam was tested by firing, for stability and suitability. The test was a complete success.

The troop has recently converted a two and one-half ton cargo truck into a rolling kitchen complete with ranges, ice boxes, lights, etc. We have found it indispensable in the field.

On the 24th of March the troop moved to temporary barracks in the 2d Cavalry Division area at Camp Funston.

Recently orders have been received for the troop to join the Sixth Division at Fort Leonard Wood, and to arrive there on the 15th of May. Packing has already commenced, and although the troop is reluctant to leave its first home, everyone is anxious to actually start training with the Division.

In spite of being in quarantine for measles during the greater part of March and April, the morale of the troop is quite high, indicated by the spirit displayed in platoon competitions and in troop athletics.

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106th Cavalry (H-Mecz)—Camp Livingston, La.

LIEUTENANT COLONEL CHARLES R. JOHNSON, JR.,
Commanding

Three hundred and forty-four Inductees have arrived and joined the Regiment and are now in their tenth week of training. These men are all of extremely high quality and have been well received by the older men in the Regiment. It was a matter of surprise to the Regiment that announced policies had not been followed out in their assignment, as there were many men among them who were not residents of the Regiment's home state. They arrived, for the most part, without boots and breeches. These articles, however, were supplied at a later date from the Corps Area of Origin. The Inductees have been separated for training into two distinct groups—one horsed and one mechanized. It was a distinct pleasure to see the Inductee platoons participate in a Mounted Review with the Regiment in their fourth week of training.

To date, no tractors for the horse vans have been received, but training for the van drivers has, nevertheless, progressed satisfactorily. The local constructing contractors kindly allowed our van drivers to ride as assistants on the constructing company's semi-trailers, and, after a week of this, permitted our drivers to do all the driving. This experience has been invaluable.

With regard to weapon training, it is the Regiment's policy, as fast as ammunition becomes available, to fire those men who have never before fired, rather than to attempt to give any one man the complete prescribed course. As a result of this policy every man in the Regiment is now familiar with the pistol and with his principal weapon.

The Regimental Band is greatly in demand. It frequently plays, by invitation, for regiments that themselves have bands. It sponsors weekly entertainments and burlesques for the men of this Regiment.

The Officers' Mess has been refinished, at private expense, being paneled half way up in a walnut finish topped with a light colored paneling above. The ceiling has been beamed in walnut and a fire-place added in one corner. Coats of Arms of all Cavalry Regiments are placed in a frieze around the room. Ladies of the Regiment are permitted in Camp for Wednesday night dinner and are welcomed on the Sunday mornings when we have a hunt breakfast. Upon occasion, the Wednesday evening meal is supplanted by a barbeque.

A steeplechase course is being constructed around the Camp. Many of the jumps will be of a permanent nature. To the west of Camp we are constructing a setup that we hope will closely approximate the Fort Riley hippodrome.

The log palisade and cabins to house the Regiment's 588 machine guns are rapidly nearing completion. This is located in the motorpark and will be a labor saver. Heretofore, some caliber .50s have had to be carried nearly a quarter of a mile. In as much as the crest on the Regiment's Coat of Arms is a blockhouse, the palisade is rather appropriate.

One troop of the Regiment is being furnished, in rotation, each week to Corps Engineers who are making a bridge reconnaissance of the maneuver area. This has afforded valuable instrutcion to the men, and has, in addition, familiarized them with a great deal of the surrounding territory.

The Regiment has done a great deal of bivouac by troop, the average unit spending between two and three nights a week in the field. Headquarters Troop recently returned from a march to the Gulf of Mexico where many men saw and felt salt water for the first time.

A snake house has been built in the Area for the purpose of familiarizing all the men with dangerous snakes. Troops returning from bivouac keep this house well supplied. Lieutenant Yoggerst, who is one of the Regiment's two authorities on snakes, is the only man bitten, so far. A rattler gave him an unpleasant week in the hospital. He is now collecting more snakes.

Since the last notes, the Executive, Lieutenant Colonel Plaisted, and the S-3, Major C. F. Sleeper, have returned from the Command and General Staff School. Major Roy D. Keehn, Jr., Captains Charles R. Bean, Joseph Temple, John L. Kracke, and Kenneth C. Haycraft are attending the Horse-Mechanized Course at the Cavalry School. Lieutenant John D. Tarpening is at Riley, taking the Motors Course, and Lieutenant Roscoe C. Buckles, the Communications Course. Several other officers have recently attended, or are attending, short four-weeks courses at Normoyle and Fort Wayne. Thirteen very welcome horse-shoers have recently returned from the Course at Fort Benning.

Entering into the spirit of the locality, the Regiment has adopted, as its Regimental Call, "Mammy's Little Babies Love Shortenin' Bread."

113th Cavalry (H-Mecz)—Camp Bowie, Texas

COLONEL MAXWELL A. O'BRIEN, *Commanding*

The regiment is now in the final phase of the first thirteen week program. The combined regimental training was started during the week commencing May 5th and will continue throughout the week of May 12th. The training is somewhat hampered because of lack of radio equipment, a sufficient number of 2½ ton Cargo Trucks, and the truck tractors for the animal and cargo trailers. In spite of this, the field exercises are believed to be progressing in a satisfactory manner.

Four hundred and fifty recruits for this regiment arrived in two trains on March 28th and March 30th, from Ft. Snelling, Minn. Their training was immediately commenced under the supervision of officers and non-commissioned officers of the regiment who were detailed from each troop and detachment.

A second group of officers are attending the Basic School at Ft. Riley, Kansas and a number of enlisted men are attending the various specialists schools. Two of our officers are enrolled at the Command and General Staff School at Ft. Leavenworth, Kansas and a second group of officers are acting as umpires for the Third Army and Eighth Army Corps.

The first shipment of solo motorcycles was received recently and the Mechanized Squadron is taking full advantage of them for training.

The range firing for the regiment was practically completed with the firing this week on the anti-aircraft range. Qualifications for known distance firing were: Rifle 73%, Pistol (Dismounted) 62.9%, Machine Gun, Cal. .30 Heavy 76.9%, Light Machine Gun 82.4%.

The regimental area is being constantly improved upon. It is expected that within a short time additional construction will provide further buildings, including officers club, day rooms, and other buildings that will be welcome additions.

Army Day afforded this regiment the honor of leading the parade at Camp Bowie. Major General Krueger, Commanding General of the Eighth Army corps was the reviewing officer.

The regiment is looking forward to the period of Combined Training and later the Army maneuvers.

124th Cavalry—Fort Brown and Fort Ringgold, Texas

COLONEL CALVIN B. GARWOOD, *Commanding*

The close of the first 13 weeks of training since induction into Federal Service on November 18th found the 124th Regiment occupying posts in the lower sector of the U.S.-Mexican border, the Second Squadron at Fort Ringgold, and the remainder of the regiment at Fort Brown.

Despite a siege of wet weather, the training of the organization has progressed without interruption and with a minimum of interference. Beginning with weekly overnight marches by troops, these now are conducted by all units at Fort Brown, at first under control of the squadron and later under regimental control. At least two tactical exercises were conducted on each of these movements.

A shortage in organizational equipment promised to be more or less of a handicap; the regiment at this time having but one mortar and one .50 caliber machine gun, while only recently has the supply of saddles been adequate. The regiment has a number of M-1 rifles, but it is not yet equipped with a sufficient number of these arms. Transportation also has felt the pinch, as a number of organizational trucks have been withdrawn from the regiment.

Since arrival at Fort Brown 432 remounts have been received, and an additional 117 are expected at an early date. Shoeing of these horses presented quite a problem, but this also was solved by pooling all the horseshoers to do the work.

The regiment was brought to full authorized strength on March 9th by the arrival of 109 selectees. These were organized into a group separate from other organizations for training purposes, while assigned to troops for administration. Non-commissioned officers specially trained for the purpose in a refresher course are detailed as instructors for this group, permitting the conduct of selectee training without interference with the progress of more seasoned men, since the instructor detail is rotated through the various troops. The selectee group has fired the preliminary course with the .22 caliber rifle and is now firing the "B" Course.

Cavalry personnel at Fort Brown was inspected by Colonel Gilbreath, representing the Third Army, and on April 11th the brigade commander, General Walter B. Pyron, conducted a training inspection of the units here, both having previously inspected the troops at Fort Ringgold.

Regimental headquarters is now installed in Post Headquarters, having moved its furniture and personnel from temporary quarters on March 20th.

Army Day was celebrated by the regiment with a demonstration to which the citizens of the Rio Grande Valley were invited, and the response to which was very satisfactory, more than 3,000 visitors having been counted when tallying of their number ceased early in the afternoon. Those who called were conducted by guides through the post and introduced to all the phases of a soldier's life, from the weapons and methods by which they are used to the housekeeping and recreation methods through which his comfort and welfare are accomplished. A dismounted parade was held in the

afternoon, attended by General Arturo L. Allatorre, commandant of the garrison of Matamoros.

Captain J. William Wiseheart, First Lieutenants Byron P. Sadler, and James D. Jamison, Second Lieutenants Ballard C. Pearson, William A. Wood, Thomas J. Newton and Joe N. Fraza, Jr., who attended the Cavalry School, and Captain Edward A. Compton, who attended the Command and Staff School, have rejoined the regiment. Absent on details to school are Captains Andrew G. Peden, William J. Miles and George B. Bennett, First Lieutenants Melvin H. Ehlert and Robert W. McIlvain, Jr., at the Cavalry School; Second Lieutenant Harry P. Pfeiffer at Communications School, Fort Riley; First Lieutenant Michel E. Levy and Second Lieutenant Julius F. Spencer at the Motor Course, Fort Riley; Second Lieutenant Allan M. Grant at Chemical Warfare School, and First Lieutenant John D. Jerabeck, M. C., at the Medical Field Service School.

The Motorcycle Platoon of Headquarters and Service Troop has received its quota of eight solo motorcycles and is busy training all members of the platoon as drivers. The tricycles for the platoon have not yet been received.

The eighth edition of the *124th Cavalry News*, published weekly by the regiment, made its appearance May 3rd. The newspaper is issued weekly, managed and edited by former newspaper men now in the service, and carries no advertising, being strictly a regimental enterprise. It is very popular with all members of the regiment, both at Fort Brown and at Fort Ringgold.

A polo club has been organized among the officers at Fort Brown, comprising 33 members. The advice of Colonel Arthur H. Wilson, Cavalry, Post Commander, and a former polo player of note, assisted materially in the organization of the club, which has played a number of practice games since its inception.

Major General John K. Herr, Chief of Cavalry, included Forts Brown and Ringgold in an inspection of training on April 26th. In a talk to officers of the regiment before his departure, General Herr reaffirmed his faith in horsed Cavalry, and expressed himself as well pleased with the progress of training in the 124th.

Both squadron commanders have been separated from the regiment, Major John W. Naylor of the First Squadron having been transferred to VIII Corps Staff, and Major Charles K. Davis, commanding the Second Squadron at Fort Ringgold, has been detailed as an umpire for Army Maneuvers. Major Jule R. Smith was relieved as regimental operations officer to succeed Major Naylor in command of the First Squadron.

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Book Reviews

RIFLE MARKSMANSHIP. By William L. Stephens, Jr., Lieutenant, Ordnance Reserve, U. S. Army. A. S. Barnes and Company, New York, 1941. 88 Pages; $1.00.

This is another of the Barnes Dollar Sports Books. It is particularly designed to help the individual who wishes to improve his score. Members of the school, college and club .22 caliber rifle teams will find this book a practical guide.

The author describes and illustrates the technique of rifle marksmanship in the following chapters: *You, Too, Can Become An Expert Marksman; The Target Rifle; .22 Caliber Long Rifle Ammunition; The Sporting Scope; The Shooting Coat & Glove; The Score Book; The Rifleman's Kit; Regulation Shooting Positions; Sights, Sighting and Aiming; Trigger Squeezing; Breathing and Holding; Cleaning and Care of the Rifle; Target Reading and Wind Direction* and *Range Routine.*

TOWARD A NEW ORDER OF SEA POWER. By Harold and Margaret Sprout. Princeton University Press, 1940. Illustrated and well documented. 332 Pages. $3.75.

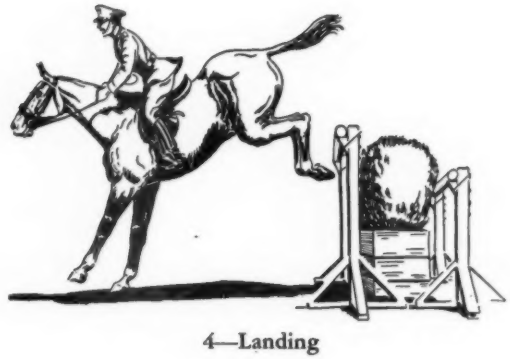
"This book continues the story which these authors began so brilliantly in *The Rise of American Naval Power.* Their earlier book was focused on the national scene. Diplomacy, wars, and naval events abroad figured in its pages, but mainly as they influenced the pace and direction of American naval development. Their new book is focused on the world scene. The influences shaping American naval growth still command attention. But the canvas is now broadened to include the rôle of sea power in general, and of American sea power in particular, following the Great War of 1914-1918.

"This book is no mere historical treatise. Its every page has a peculiar timeliness today. The fundamental nature of sea power and the conditions of its exercise, the limits of American naval power, the air-power vs. sea-power controversy, the future sea power in Europe, in the Western Hemisphere, and in the Far East, all these and many other crucial present-day questions were studied and discussed before and during the Washington Conference. Those earlier discussions provide indispensable background for an understanding of the latest act in the European tragedy, as well as for a sound judgment on our own critical problem of national defense."

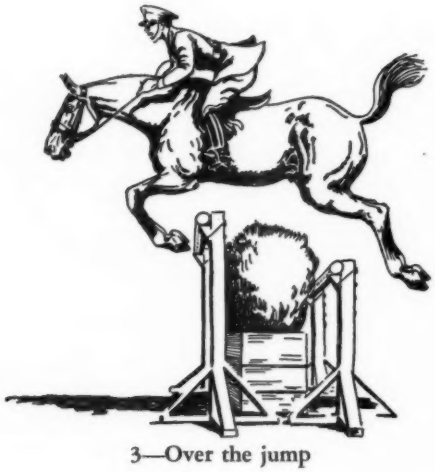
A PATHFINDER IN THE SOUTHWEST. Edited and Annotated by Grant Foreman. University of Oklahoma Press, Norman, Oklahoma. Illustrated. 298 Pages; $3.00.

A railroad to the Pacific Ocean was a conception born of the events following the Mexican War.

"In command of the southernmost surveying commission sent out was a young officer of the Topographical Engineers, Lieutenant A. W. Whipple. He was ordered



4—Landing



3—Over the jump

OVER OBSTACLES - - -

to find the most likely route between Arkansas and Los Angeles following, generally, the thirty-fifth parallel. His command, in addition to an escort of dragoons, was composed of qualified civilian scientists, mineralogists, astronomers, naturalists, and artists. Not only were their observations of assistance to the subsequent transcontinental railroad lines, but their new trail furnished a route for an increasing number of covered-wagon caravans.

"Whipple's 'itinerary' remains one of the most interesting, authoritative, and human journals on the Southwest, as it was before settlement. With the enthusiasm of a young man realizing his responsibility, he let nothing escape his observation. He describes the Indians and frontiersmen whom he met (many of them famous in the history of the West); the now famous ruins which he and his colleagues discovered; the Mexican settlements they visited; and with great clarity the wild, untrammeled beauty of an area unintruded by plow or white man."

This book is of particular interest to those who have or hope to motor over U. S. Highway 66.

✦ ✦ ✦

FROM PANAMA TO VERDUN. By Colonel Philippe Bunau-Varilla. Dorrance and Company, Philadelphia, Pa., 1940. 277 Pages; Illustrations; $2.50.

This is an autobiography and the story of the Panama Canal written by the man who started it for the French and who later induced the United States to finish it. He also planned the cross-channel tunnel from France to England; solved the Dreyfus case; lost a leg at Verdun in World War I; and died just before the Nazis entered Paris in 1940.

This book is an epic work and should interest Americans.

MY FIRST WAR. By Captain Sir Basil Bartlett, Bt. The Macmillan Company, New York. 131 Pages; $1.25.

This is an army officer's journal for May, 1940—through Belgium to Dunkirk. Here is British nonchalance and dry humor at its best. It is an intimate collection of impressions of the disaster that overtook the B.E.F. in Belgium and France, written by a man in a key position to know conditions behind the scenes. His diary, not professing to be authoritative, is full of sharp observation and classic English restraint. His job was to thwart enemy attempts at espionage, sabotage and propaganda.

✦ ✦ ✦

AMERICA IN ARMS. By John McAuley Palmer, Brigadier General, U. S. Army (Retired). Yale University Press, New Haven, Conn. 207 Pages; $2.00.

"America throughout her history has never been ready to meet the threat of war. She has fought each of her wars with unnecessary wastes of blood and treasure, and after each of them she has refused to prepare herself for the next one. All this in spite of the fact that in the very beginning Washington gave the United States a simple, economical, and democratic plan that would have prepared her for every military crisis in her history.

"General Palmer follows Washington in the belief that America should rest her defense upon a citizen army similar to that of Switzerland, and that every young American should be trained for service in that citizen army. He gives here the specifications for a military system that is suited to the genius of the modern democratic state. Here also is the blueprint for a preparedness that will make this nation impregnable."

This volume gives us something specific to consider in our future planning.

★★★

Horse Feathers

No Argument

MOTORCYCLE MP: "Didn't you hear me yell to you to stop?"

SCOUT CAR DRIVER: "No, Sarg!"

MP: "Didn't you hear me whistle?"

DRIVER: "No, Sarg!"

MP: "Didn't you see me signal?"

DRIVER: "No, Sarg!"

MP: "Well, you can't *see* nothin', and you can't *hear* nothin'—Can't you *think* nothin'?"

DRIVER: "No, Sarg!"

MP: "Pass on, *Monkey!*"

SERGEANT A: "What's that trooper's name—Don Juan?"

SERGEANT B: "No, that's Ben Loving; and that's his sweetie, Ann Howe!"

Old Timer advises: "Never play around the *flagpole.*"

Ready—Aim—?

"Halt!" cried the young recruit on his first sentry-go. The major halted.

"Halt!" the rookie cried again.

"I've halted," snapped the major. "And now what?"

"Well," faltered the John, "in the manual it says: 'Say halt three times, then fire.' "

Believe It, or Else

From lesson assignment sheet, Lesson I, Army Extension subcourse, Defense against Chemical Warfare:

"There is no difficulty in associating CN with Chloracetophenone; DM readily suggests Diphenylaminechlorarsine. Such symbols impose no strain on the memory."

SERGEANT: "You don't even know the King's English!"

RECRUIT: "I do, too; he sure ain't American."

Helpful

MEDICAL EXAMINER: "Let's see, Lad, have you any scars?"

TRAINEE: "No, sir, but I have a pack of cigarettes in my coat pocket."

Never send a man to do a boy's job; nor a boy to do a man's job.

"It was terrible!" said Mrs. Jones. "There were fifty sailors and a cavalryman killed in the wreck."

"Indeed!" said Mrs. Smith, "The poor trooper!"

It does not pay to be so busy doing so many things that you forget what you are supposed to be doing.

Confidentially

"Do you know, Mother," said the Colonel's little daughter, "Daddy's orderly is a good Christian like we hear about in Sunday School, because this morning when he was holding Daddy's remount, the horse stepped on his foot, bit his arm and then kicked him down. And, Mother, all he did was brush himself off, sit down right there on the curb and tell God all about it."

"Charge it!"

"What name?"

"Trooper Zazvorkinski."

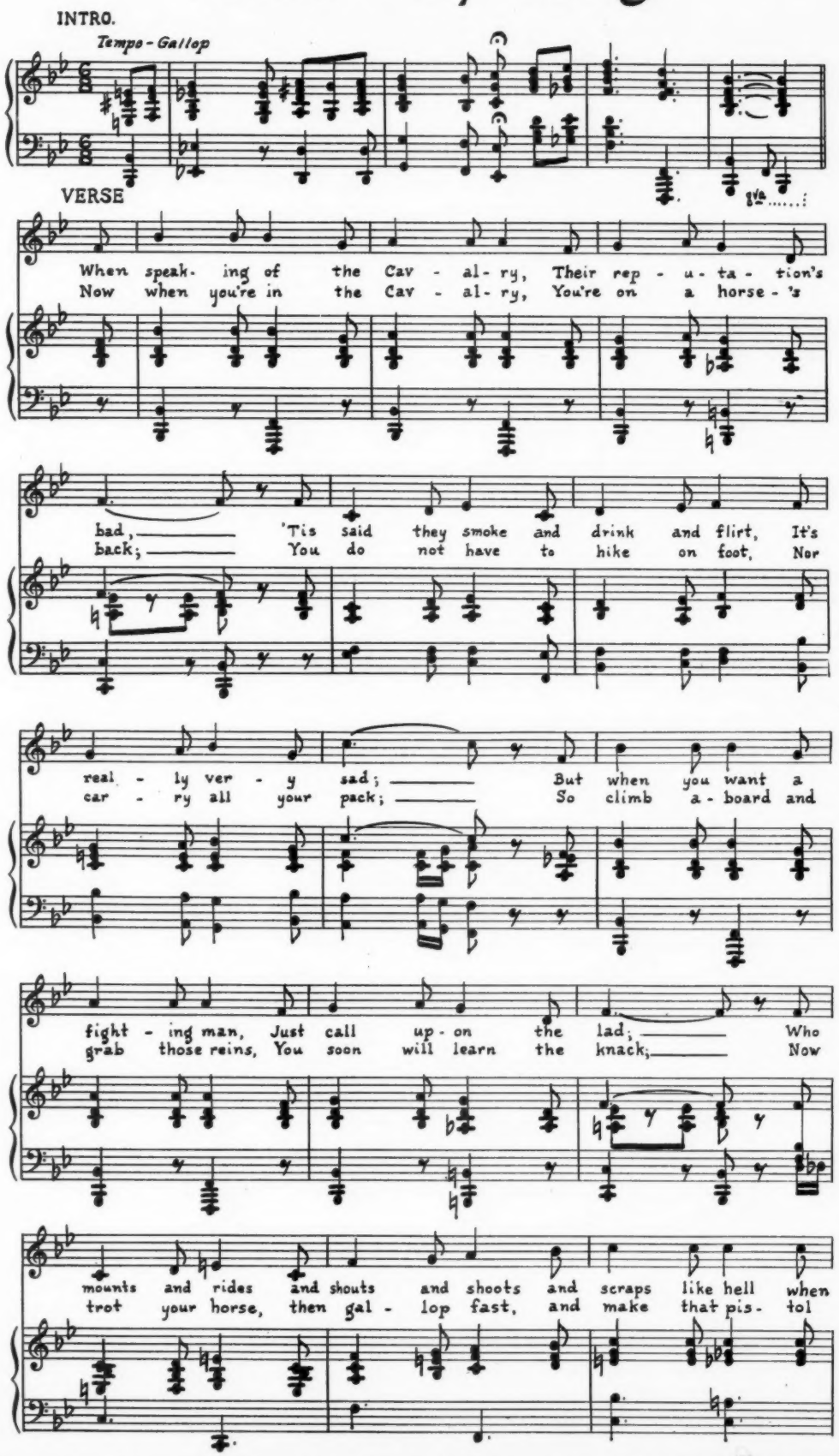
"Take it for nothing," the druggist said languidly. "For a nickel, I wouldn't write potassium permanganate and Zazvorkinski."

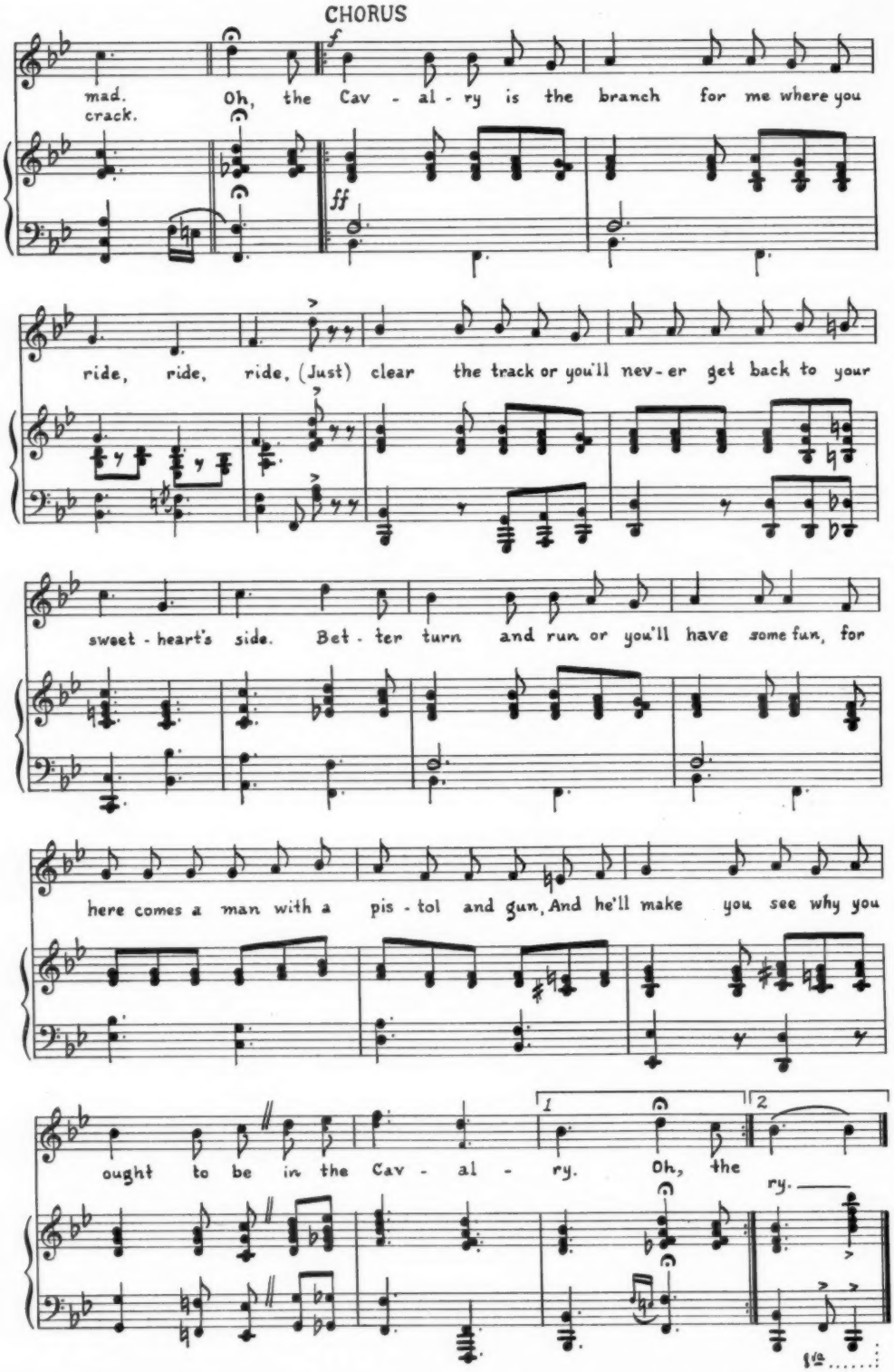
"Sis, why do you go to dances with that big lummix of a cavalryman? You know he can't dance."

"Maybe he can't dance, but boy! How he can intermission!"

"What's the matter, Trooper?"

"Wish somebody would make Sergeant Major Stired read that rubber tire article in this issue. He's *over-inflated.*"

A Cavalry Song

INTRO.
Tempo - Gallop
VERSE
When speak- ing of the Cav - al- ry, Their rep - u - ta - tion's
Now when you're in the Cav - al- ry, You're on a horse - 's
bad, 'Tis said they smoke and drink and flirt, It's
back; You do not have to hike on foot, Nor
real - ly ver - y sad; But when you want a
car - ry all your pack; So climb a - board and
fight - ing man, Just call up - on the lad; Who
grab those reins, You soon will learn the knack; Now
mounts and rides and shouts and shoots and scraps like hell when
trot your horse, then gal - lop fast, and make that pis - tol

Words and Music by Lieutenant Colonel Ronald H. Peters*

CHORUS
mad. crack. Oh, the Cav - al - ry is the branch for me where you
ride, ride, ride, (Just) clear the track or you'll nev - er get back to your
sweet - heart's side. Bet - ter turn and run or you'll have some fun, for
here comes a man with a pis - tol and gun, And he'll make you see why you
ought to be in the Cav - al - ry. Oh, the
ry.
1
2
1st

*Copyright, 1940. Colonel Peters, formerly a cavalryman, is now S-3, 75th Field Artillery Brigade, Camp Forrest, Tennessee.

War Department Changes

Cavalry Personnel

(From March 16, 1941 to May 19, 1941)

Captain Robert M. Bacher, from Ft. Sam Houston, Tex., to Ord. Works, Baytown, Tex.

Captain Lewis R. Stretch, March 28, to duty with AGD.

Major J. K. Baker, relieved as military attaché to Greece, Athens; assigned as military attaché, Bagdad, Iraq.

Second Lieutenant Flournoy H. Barksdale, from Ft. Knox, Ky., April 14, to Virginia Military Institute, Lexington, Va.

Lieutenant Colonel James W. Barnett, Presido of San Francisco, Calif., to GSC, 4th Army.

Lieutenant Colonel William T. Bauskett, Jr., from Ft. Knox, Ky., to commanding officer of troops on the USA Transport *J. Franklin Bell*, Ft. Mason, Calif. Sail New York, April 5, 1941.

Captain Robert H. Bayne, from Ft. Stotsenburg, P. I., to duty with QMC.

Major W. S. Biddle, relieved Fort Bliss; assigned as assistant military attaché, London, England; to report in office, A. C. of S., G-2, Washington D. C., May 12, for temporary duty.

Colonel Robert Blaine, relieved Philippine Islands; assigned Hq., 9th C. A., Presidio of San Francisco for duty pending retirement, sailing from Manila for San Francisco, July 15.

Captain James N. Bossidy, from Westover Field, Mass., April 15, to Bolling Field, Washington, D. C.

Lieutenant Colonel Frederic W. Boye, Fort Bliss, Tex., to Acting C. of S., 1st Cav. Div., that station.

Lieutenant Colonel Harry L. Branson, from Pueblo, Colo., not later than April 15, to CO of troops on USA transport *Henry T. Allen*.

Captain F. C. Bridgewater, relieved 6th Recon. Troop, Fort Riley; assigned 7th C. A. Service Command, that station.

Colonel N. B. Briscoe, assigned command of Fort Knox.

Captain Frank H. Britton, from West Point, N. Y., June 16, to 1st Armored Division, Ft. Knox.

First Lieutenant R. W. Bristol, relieved Ft. Custer, March 29; assigned staff, Cav. School, Fort Riley.

Major C. V. Bromley, Jr., detailed as member of G. S. C.; assigned G. S. with troops, March 14, and Hq., 1st Armored Div., Fort Knox; relieved present duty with that division.

Lieutenant Colonel W. E. Buchly, relieved Fort Rosecrans; assigned 3rd Armored Division, Camp Polk, La.

Lieutenant Colonel H. A. Buckley, relieved Alameda High School, Calif., May 1; assigned 3d Armored Div., Camp Polk, La.; previous orders revoked.

Lieutenant Colonel Malcolm Byrne, relieved St. Mel High School, Chicago; assigned 2d Armored Div., Fort Benning.

First Lieutenant P. F. Cannon, relieved 9th Cav., Ft. Riley; assigned staff, Cavalry School, that station.

Lieutenant Colonel J. N. Caperton, relieved present duty at Fort Riley; assigned 4th Cav. Brig., that station.

Lieutenant Colonel Marion Carson, relieved U. S. M. A., June 30; assigned 1st Cav. Div., Fort Bliss.

Captain T. W. Chandler, relieved Fort Benning, April 21; assigned 4th Cav. Brig., Fort Riley.

Colonel F. K. Chapin, assigned command of Pine Camp, N. Y.

Colonel G. W. Chipman, relieved as instructor, Illinois N. G., Chicago; assigned Armored Force R. C., Fort Knox.

Lieutenant Colonel McFarland Cockrill, detailed in I. G. D., May 21; relieved 56th Cav. Brig., Fort McIntosh; assigned 2d Cav. Div., Fort Riley.

Major E. P. Crandell, detailed A. G. D., April 8; relieved Fort Riley; assigned A.G.O., Washington, D. C.

First Lieutenant William M. Cummings, from Ft. Riley, Kans., to Philippine Dept. Sail N. Y., June 21.

Captain J. O. Curtis, Jr., relieved Fort Bliss, April 15; assigned Hq., IX Army Corps, Ft. Lewis.

Major C. K. Darling, relieved 1st Cav. Div., Fort Bliss; assigned 8th C. A. Service Command, Fort Bliss.

Lieutenant Colonel F. C. DeLangton, relieved 1st Cav. Div., Fort Bliss, April 1; assigned 6th C. A. Service Command, Sault Sainte Marie, Mich.

Colonel M. A. Devine, Jr., orders amended to assign him 1st Cavalry Division, Ft. Bliss.

Lieutenant Colonel T. G. Dobyns, relieved detail in I. G. D., and C. Z.; assigned 1st Armored Div., Fort Knox.

Lieutenant Colonel Frederick F. Duggan, prior orders amended; from Philippine Dept., to Fort Knox, Ky.

Lieutenant Colonel Harold E. Eastwood, from Ft. Riley, Kans., to O. C. of S., Washington, D. C.

Colonel K. B. Edmunds, relieved as assistant commandant, C. and G. S. School, Ft. Leavenworth, August 1; detailed O. R., 8th C. A., San Antonio.

Second Lieutenant John Z. Endress, from Stockton, Calif., to AC Basic Flying School, Moffett Field, Calif.

Colonel H. M. Estes, relieved office, C. of S., Washington, D. C., May 5; assigned office, C. of Cav., Washington, D. C.

Lieutenant Colonel C. W. Fake, relieved Fort Riley; to proceed home and await retirement; unexpired leave of absence revoked.

Lieutenant Colonel Waldemar A. Falck, from Tucson, Ariz., May 1, 1941, to 4th Cav. Brigade, Ft. Riley, Kans.

Captain Houston S. Farris, from Ft. Riley, Kans., April 3, 1941, to 1st Cav. Div., Fort Bliss, Tex.

Major C. W. Feagin, relieved Glendale High Schools, Calif., June 1; assigned 11th Cav., Camp Seeley, Calif.

Lieutenant Colonel H. E. Featherstone, relieved Central Catholic High School, San Antonio; assigned Hq., 8th C. A., Fort Sam Houston.

Lieutenant Colonel P. C. Febiger, relieved as instructor, Wyoming N. G., Cheyenne; assigned 1st Armored Div., Fort Knox; previous orders amended.

First Lieutenant David McC. Flournoy, III, Washington, D. C., to office C. of S., that station.

Lieutenant Colonel H. W. Forster, relieved Mattoon High School, Ill., June 1; assigned 3d Armored Div., Camp Polk, La.; previous orders revoked.

Major H. W. Frazee, detailed as member of G. S. C.; assigned G. S. with troops, and will report to Comdg. Gen., 35th Div., Camp Jos. T. Robinson for duty with G. S. C.

Major James W. Fraser, from Fort Sheridan, Ill., March 30, 1941, to office AG; Washington, D. C.

Captain W. B. Fraser, relieved Fort Riley, assigned U. S. M. A.

First Lieutenant Frank B. Gamsby, from Langley Field, Va., May 12, to New Orleans, La.

Lieutenant Colonel R. H. Garity, relieved Univ. of Illinois, Champaign; assigned 3d Armored Div., Camp Polk, La., June 4.

Major Jack G. Gault, from Ft. George G. Meade, Md., May 18, to Hq., Armored Force, Fort Knox, Ky.

Lieutenant Colonel Louis G. Gibney, from College Station, Tex.; April 1, 1941, to Univ. of Ariz., Tucson, Ariz.

First Lieutenant Robert R. Gideon, Jr., from Kelly Field, Tex., to Randolph Field, Tex.

Colonel Frederick Gilbreath, relieved 7th Ca., Fort Bliss; assigned San Francisco Port of Embarkation, Fort Mason.

Second Lieutenant E. W. Grant, relieved 4th Cav., Fort Meade, S. Dak.; assigned Spartan School of Aero., Tulsa, Okla., April 30.

Lieutenant Colonel W. R. Hamby, relieved Columbus high schools, Ga., May 12; assigned 3d Armored Division, Camp Polk, La.; to report at Camp Beauregard for temporary duty until June 1.

First Lieutenant Joseph K. Hamilton, from Pope Field, N. C. to Charlotte, N. C.

Captain J. F. Haskell, relieved Ft. Bliss, Texas; assigned O. C. of S., Washington, D. C.

Captain P. D. Harkins, relieved Ft. Myer; assigned U. S. M. A.

Lieutenant Colonel Ernest N. Harmon, from Ft. Knox, Ky., to office, C. of S., Washington, D. C.

Captain R. S. Harper, relieved, Ft. Bliss; assigned 3d Armored Div., Camp Polk, La.

Major E. L. Harrison, relieved Hq. 9th Div., Fort Bragg; assigned office, C. of S., Washington, D. C.

Second Lieutenant Frank C. Healy, from Ft. Meade, S. Dak., to Cavalry School, Fort Riley, Kans.

Captain Adolphus K. Heyner, Ft. Hayes, Ohio; det. with G. S. C., 5th Corps Area, that station.

Lieutenant Colonel Harrison Herman, relieved 8th C. A. Service Command, Ft. Bill; assigned 1st Cav. Div., that station.

Lieutenant Colonel W. B. Higgins, relieved 107th Cav., Camp Forest, Tenn.; assigned Hq., V Army Corps, Camp Beauregard.

Captain Cecil Himes, relieved 7th Div.,

Fort Ord.; assigned 6th Reconnaissance Troop, Fort Riley.

Major K. G. Hoge, detailed in A. G. D., May 7; relieved 1st Cav. Div., Fort Bliss; assigned 2d Cav. Div., Fort Riley; previous orders revoked.

Captain S. W. Holderness, relieved Fort Riley; assigned U. S. M. A.

Lieutenant Colonel C. A. Horger, relieved Ashland High School, Ky., May 10; assigned 9th C. A. Service Command, Camp Callan, Calif.

Captain Frank DeK. Huyler, Jr., from Westover Field, Mass., April 10, to GHQ Air Force, Bolling Field, D. C.

Major C. C. Jadwin, relieved as assistant military attaché to Italy; assigned as military attaché to Sofia, Bulgaria.

Captain R. V. D. Janzan, relieved Fort Devens, Mass.; assigned to Cav. Brig., Ft. Riley, Kansas.

Major H. W. Johnson, relieved U.S.M.A.; assigned 3d Cav. Brig., Fort Riley, Kans.

Captain M. W. Kane, relieved Western Military Academy, Alton, Ill., May 15; assigned 3d Armored Div., Camp Polk, La.; to report at Camp Beauregard for temporary duty until June 1.

Lieutenant Colonel Charles S. Kilburn, Washington, D. C., to office, C. of S., Washington, D. C.

Colonel Stanley Koch, relieved recruiting duty, Houston, Tex.; assigned that duty at Hq., 8th C. A., Fort Sam Houston.

Lieutenant Colonel Renn Lawrence, relieved Chicago high schools; assigned 3d Armored Div., Camp Polk, La., after temporary duty at Camp Beauregard until June 1.

Colonel Clarence Lininger, relieved civilian component affairs duty, Hq., 2d C. A. Governors Island, May 1; assigned 2d C. A. Service Command, Fort Hamilton.

Colonel Aubrey Lippincott, retired from Los Angeles, Calif., May 31, because of disability.

Captain N. A. Loeb, relieved A. C. B. F. School, Montgomery; assigned 4th Cav. Brig., Fort Riley.

Major Glen C. McBride, Ft. Hayes, Ohio, det. with G. S. C., 5th Corps Area, that station.

Captain J. F. McCaslin, relieved 107th Cav., Shakerheights, Ohio; assigned office, C. of Ord., Washington, D. C.

Captain Josiah N. Macy, from Ft. Devens, Mass., to office, C of Staff, Washington, D. C.

Major H. G. Maddox, relieved 1st Cav. Div., Fort Bliss, and temporary duty at C. and G. S. School, Fort Leavenworth, June 21; assigned 3d Armored Div., Camp Polk, La.

Lieutenant Colonel J. E. Maher, relieved N. G. duty, Hq., 3d C. A., Baltimore, April 22; assigned 3d C. A. Service Command, Ft. George G. Meade, Md.

Captain Robert M. Mann, Ft. Hayes, Ohio, det. with G. S. C., 5th Corps Area, that station.

Major Charles C. Meehan, prior orders revoked; from Ft. Bragg, N. C. to 4th Cavalry Brigade, Ft. Riley, Kans.

Second Lieutenant M. C. Meigs, relieved 1st Cav. Div., Fort Bliss, assigned 2d Armored Div., Fort Benning.

Captain F. D. Merrill, assigned as assistant military attaché, Tokyo, Japan, in addition to his present duties there.

Captain David A. Miller, from Ft. Riley, Kans. to Philippine Dept. Sail San Francisco, June 12.

Lieutenant Colonel J. G. Monihan's orders amended to sail from San Francisco for Philippine Islands, June 12.

Lieutenant Colonel H. H. Neilson, relieved Nashville high schools, Tenn.; assigned 4th Armored Div., Pine Camp, N. Y.

Lieutenant Melvin N. Nyquist, relieved Ft. Riley, Kans.; assigned to P. I. Dept.

Lieutenant Colonel William Van D. Ochs, from Wilmington, N. C., to 4th C.A.S.C., Camp Stewart, Ga.

Second Lieutenant I. W. Overland, assigned with Q. M. C., March 24, and as assistant to constr. Q. M., Fort Bliss; relieved 8th C. A. Service Command, Fort Sill.

Lieutenant Colonel D. S. Perry, relieved detail in I. G. D., assignment at Hq., IX Army Corps, Fort Lewis, April 30; assigned to 6th Cav., Fort Oglethorpe.

Major Vernon Peterson, from Moffett Field, Calif., May 30, to A. C. Basic Flying School, Taft, Calif.

Colonel E. P. Pierson, relieved recruiting duty, New York City, April 21; assigned recruiting duty, Hq., 5th C. A., Fort Hayes.

Lieutenant Edward P. Ramsey, relieved Seeley, Calif.; assigned P. I. Dept.

Major T. J. Randolph, detailed as member of G. S. C.; assigned G. S. with troops, and Hq., 2d Army, Memphis, Tenn.; relieved present duty at that headquarters.

Lieutenant Colonel Eugene A. Regnier, from Washington, D. C., March 25, 1941, to 1st Cav. Div., Fort Bliss, Tex.

Captain J. V. Richardson, relieved C. Z.; assigned 3d Armored Div., Camp Polk, La.

Colonel H. R. Richmond, will retire May 31, statutory age limit.

Captain Russell V. Ritchey, from Selfridge Field, Mich., to Philippine Dept. Sail San Francisco, June 5.

Lieutenant R. M. Rogers, relieved Fort Bliss; assigned 3d Armored Div., Camp Polk, La.

Captain Jean T. Ross, Fort Custer, Mich., to G. S. C. 5th Div., that state.

Second Lieutenant Frank A. Rudin, from Fort Bliss, Tex., May 8, to 1st Armored Div., Fort Knox, Ky.

Major C. L. Ruffner, relieved Ft. Bliss, Tex.; assigned O. C. of S., Washington, D. C.

Major R. M. Shaw, relieved U. S. M. A.; assigned 3d Cav. Brig., Ft. Riley, Kans.

Lieutenant Colonel James E. Slack, from Ft. Moultrie, S. C., to recruiting, Overseas Discharge and Repl. Depot, Charleston, S. C.

Lieutenant Colonel A. C. Smith, detailed as member of G. S. C.; assigned G. S. with troops, and Hq., 4th Armored Div., Pine Camp, N. Y., effective between March 15 and April 15; relieved Fort Knox.

Major Vernon Snively, relieved 9th C. A. Service Command, Presidio of Monterey; assigned Armored Force, Fort Knox, sailing from San Francisco for New York, April 12.

Major Elmer V. Stansbury, from Ft. Oglethorpe, Ga., April 10, to 104th Cav., Indiantown Gap, Pa.

Captain Lewis R. Stretch, from Ft. Bragg, N. C., March 22, 1941, to office A. G., Washington, D. C.

Lieutenant Colonel J. B. Taylor, relieved O. R., 8th C. A., San Antonio, August 1; assigned 3d Armored Div., Camp Polk, La.

First Lieutenant James C. Taylor, from Ft. Bliss, Tex., to Cav. School, Fort Riley, Kans.

2nd Lieutenant Robert B. Thieme, from Stockton, Calif., May 30, to A. C. Advanced Flying School, Phoenix, Ariz.

First Lieutenant Roy B. Thompson, Jr., from Fort Knox, Ky., May 21, to 2d Cav. Div., Ft. Riley, Kans.

Major J. R. Thornton, relieved O. R., 4th C. A., Atlanta, April 23; assigned 7th C. A. Service Command, Fort Leavenworth.

First Lieutenant John C. F. Tillson, 3rd, from Moffett Field, Calif., to 1st Cav. Div., Fort Bliss, Tex.

Major F. T. Turner, relieved Fort Meade, S. Dak.; to proceed home and await retirement.

Captain D. O. Vars, relieved Fort Myer; assigned 104th Obsn. Sq., Frederick, Md.; to report as student, aircraft observing, A. C. A. F. School, Brooks Field, May 3.

Lieutenant Colonel B. B. Vail, relieved Sidney Lanier High School, Montgomery, Ala.; assigned 7th C. A. Service Command, Fort Meade, S. Dak.

Lieutenant Wm. H. Ward, relieved Fort Riley, Kans.; assigned to P. I. Dept.

Captain J. K. Waters, relieved U. S. M. A., June 12; assigned 2d Armored Div., Fort Benning.

Major John P. Willey, prior orders amended; from Fort Riley, Kans., April 8, to 4th Armored Div., Pine Camp, N. Y.

Lieutenant Colonel Melvin S. Williamson, prior orders amended; relieved April 10, 1941 from Boys' High School, Decatur, Ga.

Lieutenant Colonel R. E. Willoughby's orders amended to sail from New York for C. Z., June 5.

Second Lieutenant Donald H. Wills, from Ft. Riley, Kans., to Philippine Dept. Sail San Francisco, June 12.

Lieutenant Colonel Vennard Wilson, relieved staff, Cav. School, Fort Riley, May 1; assigned office, C. of Cav., Washington, D. C.

Major W. G. Wyman, detailed as member of G. S. C.; assigned G. S. with troops, and G. S. C., IX Army Corps.

Lieutenant Theodore Wysock, relieved, Ft. Meade, S. Dak.; assigned P. I. Dept.

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CAVALRY OFFICERS (RETIRED) On Active Duty

Captain George W. Bailey, Ashland High School, Ky.

Major Raymond C. Blatt, Columbus, Ga.

Major Charles W. Burkett, Louisville High School, Ky.

Lieutenant Colonel Robert E. Carmody, Hq., 4th C. A., Atlanta, Ga.

Lieutenant Colonel Jay K. Colwell, CCC, 8th C. A., Fort Sam Houston, Texas.

Lieutenant Colonel Emile Engel, New Hanover High School, Wilmington, N. C.

Major E. L. Grisell, CCC, 8th C. A., Fort Sam Houston, Texas.

Major George F. Patten, Recruiting, Los Angeles, Calif.

Major Lawrence Patterson, Glendale High School, Calif.

Lieutenant Colonel John E. Selby, Johnson City High School, Tenn.

Major James C. Ward, CCC, 9th C. A., San Francisco, Calif.

NOTE—*This list is in addition to those published in our January-February and March-April, 1941 issues. It is requested that any retired cavalryman who is now on active duty and whose name does not appear on these lists, please notify* THE CAVALRY JOURNAL *or the Office, Chief of Cavalry.*

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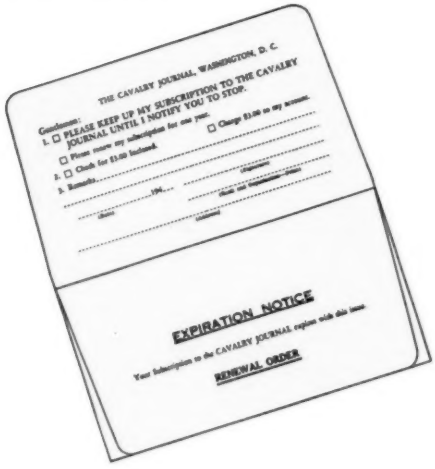
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